ENVIRONMENTAL ASSESSMENT

DOI-BLM-CA-D050-2012-083-EA

LaPozz Project

December 2012

U.S. Department of the Interior
Bureau of Land Management
California Desert District Office
Ridgecrest Field Office
300 S. Richmond Rd.
Ridgecrest, California 93555

It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

DOI-BLM-CA-D050-2012-083-EA

CALPORTLAND COMPANY
LAPOZZ PROJECT
KERN COUNTY, CALIFORNIA

Environmental Assessment
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LIST OF ACRONYMS

°	degrees
4WD	four wheel drive
AB	Assembly Bill
ACEC	Areas of Critical Environmental Concern
amsl	above mean sea level
ANFO	ammonium nitrate and fuel oil
AUMs	Animal Unit Months
BLM	Bureau of Land Management
BMPs	Best Management Practices
CalPortland	CalPortland Company
CARB	California Air Resources Board
CCR	cryptocrystalline rock
CDCAP	California Desert Conservation Area Plan
CDFG	California Department of Fish and Game
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CESAs	Cumulative Effects Study Areas
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2(e)	carbon dioxide equivalent
County	Kern County
CRHP	California Register of Historic Places
CUP	Conditional Use Permit
District	BLM California Desert District
EA	Environmental Assessment
EDD	Employment Development Department
EKAPCD	Eastern Kern Air Pollution Control District
EO	Executive Order
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act of 1973, as amended
F	Fahrenheit
FCR	field contact representative
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FLPMA	Federal Land Policy and Management Act of 1976
GHG	greenhouse gas
GPS	Global Positioning System
H:V	horizontal to vertical
HCP	Habitat Conservation Plan
HFRA	Healthy Forest Restoration Act
HMA	Herd Management Area
I-5	Interstate 5

ID	Interdisciplinary
IM	Instruction Memorandum
km	kilometers
m^2	square meters
$\mu g/m^3$	micrograms per cubic meter
MBTA	Migratory Bird Treaty Act of 1918
MDB&M	Mount Diablo Base and Meridian
MGSCA	Mohave Ground Squirrel Conservation Area
Mining Law	General Mining Law of 1872
MLRA	Major Land Resource Area
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966
NO_2	nitrogen dioxide
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
O_3	ozone
P.L.	Public Law
Plan	Plan of Operations #CACA-52077
$PM_{2.5}$	particulate matter with aerodynamic diameter less than 10 microns
PM_{10}	particulate matter with aerodynamic diameter less than 2.5 microns
ppm	parts per million
Project	LaPozz Project
RFFAs	Reasonably Foreseeable Future Actions
RFO	Ridgecrest Field Office
ROWs	rights-of-way
SFHA	Special Flood Hazard Area
SMARA	Surface Mining and Reclamation Act of 1975
SO_2	sulfur dioxide
SR	State Route
STPs	shovel test probes
SWPPP	Storm Water Pollution Prevention Plan
TCPs	Traditional Cultural Properties
U.S.	United States
USFWS	United States Fish and Wildlife Service
VRM	Visual Resource Management
WSA	Wildlife Survey Area

1 INTRODUCTION / PURPOSE OF AND NEED FOR ACTION

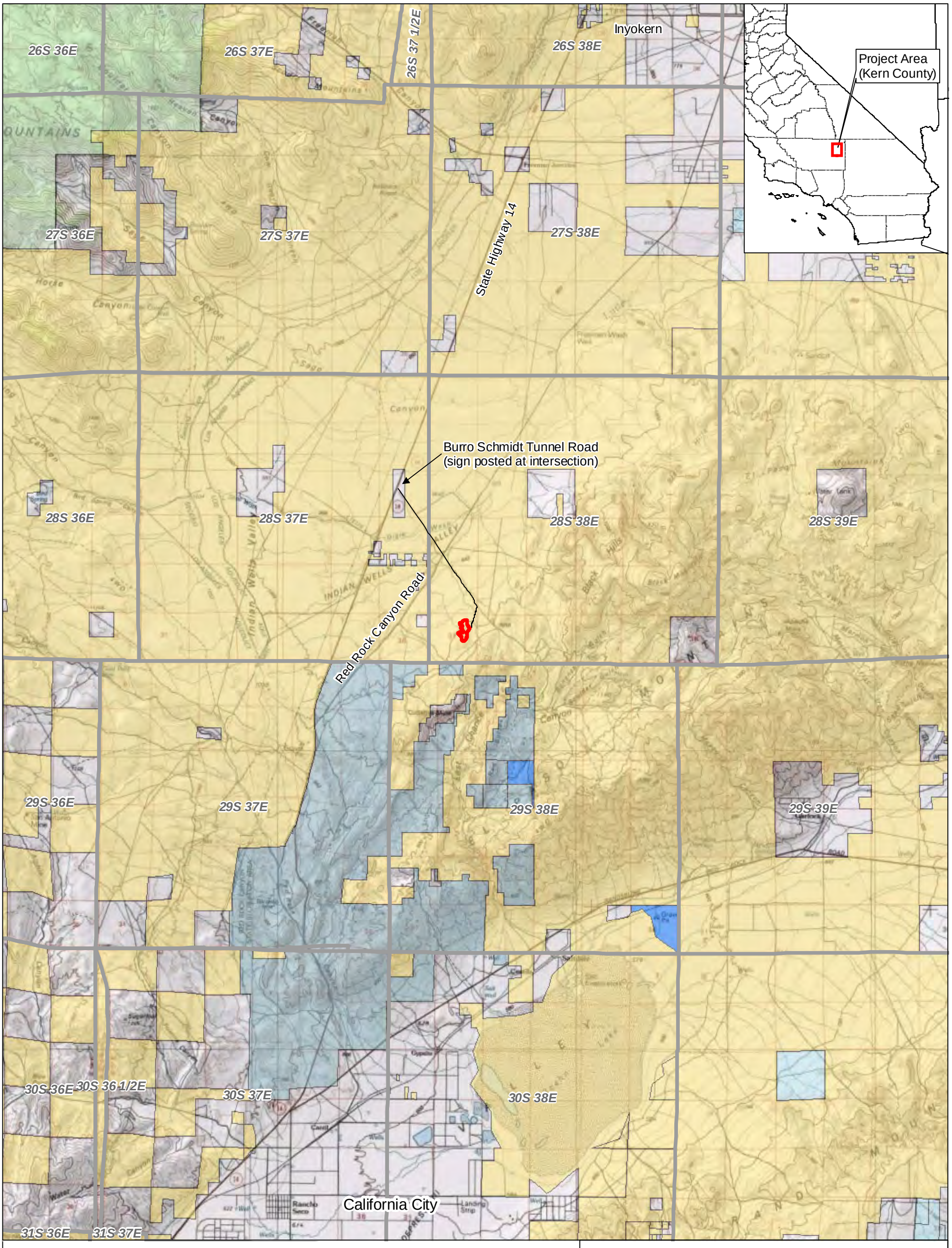
1.1 Introduction

CalPortland Company (CalPortland) proposes to conduct a new surface mining operation for pozzolan material at the LaPozz Project (Project) located on approximately 145 acres of mining claims on land administered by the Bureau of Land Management (BLM), Ridgecrest Field Office (RFO), and subject to 43 Code of Federal Regulations (CFR) 3809. As shown on Figure 1.1.1, the Project is located in Section 31, Township 28 South, Range 38 East, Mount Diablo Base and Meridian (MDB&M), Kern County, California (Project Area), and approximately 10.5 miles south of the Freeman Junction and 17 miles southwest of the city of Inyokern in Kern County, California. The Project Area is accessed from State Route (SR) 14 at a turn-off near Mile Marker 50, which is the Burro Schmidt Tunnel Road (BLM Route EP-15). This road is travelled for approximately 1.7 miles before intersecting with Red Rock Inyokern Road and continues another 1.2 miles before the turn-off onto an unnamed existing dirt access road. This access road is then travelled for approximately 0.64 mile (3,386 feet) southwest to the Project.

CalPortland has staked seven 20-acre lode claims, LaPozz No. 1 through LaPozz No. 7 (CAMC286144 through CAMC286149 and CAMC0296947). CalPortland has performed two phases of exploration activities in the form of bulk sampling at the Project under an exploration Plan of Operations CACA-48524, which authorized 0.35 acre of surface disturbance. The bulk sampling determined that the pozzolan deposit met certain criteria to warrant full development.

In May 2010 a Plan of Operations CACA-52077 (Plan) was submitted to the BLM in accordance with the BLM's 43 CFR 3809 regulations for the proposed surface mining operation. Project operations would include the mining of pozzolan material, the operation of a portable crushing plant to process material prior to being hauled off site, and reclamation. The proposed activities in the Plan would create 19.85 acres of new surface disturbance related to mineral extraction and an additional 14.2 acres surrounding the deposit may be temporarily disturbed from the operations. Approximately 0.08 acre of surface disturbance would be related to the widening of an existing dirt access road from 12 to 15 feet in five discrete segments. Therefore, the total surface disturbance related to the Project is 34.48 acres, which includes existing disturbance from exploration activities.

Pozzolan is a natural material which, when combined with calcium hydroxide, exhibits cementitious properties. In addition to the carbon dioxide (CO_2) reduction benefit, new pozzolan sources are needed to replace or augment supplies of Class F fly-ash. One of the most common pozzolanic cement substitutes, fly-ash is the product of coal-fired power generation. As coal use is phased out, fly-ash sources would diminish. In addition, as scrubber technology by power plants is becoming more widely used, the scrubber equipment produces a waste by-product that contains contaminants unsuitable to cement chemistry. Therefore, as additional coal-fired power plants implement the scrubber technology, fewer supplies of fly-ash would be available, requiring other natural sources to be discovered and mined to meet the needs of the cement industry. The other current pozzolan used in the marketplace is blast furnace slag. However, no such slag is produced in the western United States (U.S.), and any slag sources would need to be



Explanation

- Project Area
- Existing Access Road

Land Status

- Bureau of Land Management
- CA Dept of Fish and Game
- CA Dept of Parks and Recreation
- State Lands Commission
- USDA Forest Service
- Unclassified/Private

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0 1 2 3 4 Miles

Projection: UTM Zone 11 North, NAD83

N

BUREAU OF LAND MANAGEMENT

LAPOZZ PROJECT

Project Location, Access, and Land Status Map

Figure 1.1.1

11/30/2012

imported from Asia. Increased greenhouse gas (GHG) emissions would be associated with long-distance transport.

1.2 Purpose of and Need for Action

The purpose of this Project is to provide CalPortland the opportunity to extract minerals from public land open to location under the 1872 General Mining Law, as amended (Mining Law), within the Project Area. This Project is necessary to provide a source of pozzolan for CalPortland's Mojave cement plant to produce pozzolan cement as a CO_2 reduction measure pursuant to the emission reduction requirements of Assembly Bill (AB) 32. The need for the action is established by the BLM's responsibility under the Federal Land Policy and Management Act (FLPMA) and the BLM Surface Management Regulations at 43 CFR 3809, to respond to a mining plan of operations and to take any action necessary to prevent unnecessary or undue degradation of the lands.

The decision the BLM would make based on the National Environmental Policy Act (NEPA) includes the following: approval of the Plan with no modifications to authorize the mining and exploration activities; approval of the Plan with additional mitigation measures that are needed to prevent unnecessary or undue degradation of public lands, protect sensitive resources values, and provide for reclamation of disturbed areas; or deny approval of the Plan and not authorize the mining and exploration activities if it is found that the proposal does not comply with the 3809 regulations and the FLPMA mandate to prevent unnecessary or undue degradation.

1.3 BLM Responsibilities and Relationship to Planning

On lands open to location under the Mining Law, the BLM administers the surface of public land and federal subsurface mineral estate under the Mining Law and the FLPMA. The FLPMA also governs BLM's administration of public lands not open to location under the Mining Law.

The surface management regulations recognize that the BLM is required to comply with the NEPA through preparation of an environmental document, in this case an EA, which analyzes the potential impacts of the Proposed Action and any consultation required under other laws including the National Historic Preservation Act of 1966 (NHPA) and the Endangered Species Act (ESA).

The BLM is responsible for the preparation of this Environmental Assessment (EA), which was prepared in conformance with the policy guidance provided in the updated BLM NEPA Handbook H-1790-1 (BLM 2008).

1.3.1 Land Use Plan Conformance

1.3.1.1 California Desert Conservation Area Plan

The Proposed Action is in conformance the BLM's California Desert Conservation Area Plan 1980, as amended (CDCAP) (BLM 1980), which defers to the 43 CFR 3809 regulations, and serves as the Resource Management Plan for the California Desert District. The Project Area is located within a multiple use area; therefore, the following BLM guidelines for mineral exploration and development as stated on Page 89 of the CDCAP apply to the Project:

1. Within the multiple-use management framework, assure the availability of known mineral resource lands for exploration and development.

2. Encourage the development of mineral resources in a manner which satisfies national and local needs and provides for economically and environmentally sound exploration, extraction and reclamation processes.

3. Develop a mineral resource inventory, Geology, Energy, and Minerals database, and professional, technical, and managerial staff knowledgeable in mineral exploration and development.

In addition, specific objectives outlined in the Geology, Energy, and Minerals Resources Element in the CDCAP are to:

1. Continue to recognize ways of access and opportunities for exploration and development on public lands which are assessed to have potential for critical mineral resources, those mineral of national defense importance, those of which the U.S. imports 50 percent or more, and those of which the U.S. is a net exporter.

2. Continue to recognize ways of access and opportunities for exploration and development on public lands which are assessed to have potential for energy mineral resources. These are geothermal, oil, gas, uranium, and thorium, considered to be paramount priorities both nationally and within the State of California.

3. Continue to recognize ways of access and opportunities for exploration and development on public lands which are assessed to have potential for mineral resources of local and state importance. These are sand and gravel, limestone, gypsum, iron, specialty clays, and zeolites.

1.3.1.2 West Mojave Plan

The BLM California Desert District, in cooperation with the United States Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), and local governments, has developed the West Mojave Plan. This multi-species management strategy for 8.6 million acres provides for long-term conservation of the desert tortoise (*Gopherus agassizii*) and other rare or sensitive species, such as the Mohave ground squirrel (MGS) (*Xerospermophilus mohavensis*). The plan is the basis for a programmatic Section 7 consultation for BLM activities in the planning area and serves as an Habitat Conservation Plan (HCP) for local governments to obtain section l0(a)(1)(B) permits.

1.3.2 Local Land Use Planning and Policy

CalPortland has submitted an application for a Conditional Use Permit (CUP) and surface mining permit in conformance with the California Surface Mining and Reclamation Act of 1975 (SMARA) to the Kern County Planning Department (County). The application outlined how the Project intends to meet the provisions of SMARA and associated regulations. As part of processing the CUP and SMARA application, the County would ensure that the Project is in compliance with the California Environmental Quality Act (CEQA).

1.4 Scoping

The Project was internally scoped at a meeting with the BLM Interdisciplinary (ID) team on July 6, 2010, at the BLM office in Ridgecrest, California. In compliance with Section 106 of the NHPA, the following Native American tribes were sent a letter on January 11, 2011, informing them of the Project: Kern Valley Indian Council; Tubatulabals of Kern Valley; Nuui Cunni Interpretative Center; and Monache Intertribal Council.

1.5 Resources To Be Analyzed

During an internal meeting, BLM personnel identified the elements associated with supplemental authorities and other resources and uses to be addressed in this document as outlined in Chapter 3. The following resources to be analyzed the Proposed Action were identified:

- Air and Atmospheric Values;
- Cultural Resources;
- Geology and Mineral Resources;
- Native American Religious Concerns;
- Noxious Weeds, Invasive and Nonnative Species;
- Recreation;
- Special Status Species;
- Vegetation; and
- Wildlife.

2 ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1 Proposed Action

Under the Proposed Action, CalPortland proposes to conduct mineral extraction and associated activities that would result in a maximum of 34.48 acres of surface disturbance, of which all of the acres would be subject to reclamation. The pozzolan deposit proposed to be mined consists of a cap rock that covers 20.2 acres, which encompasses the 0.35 acre of existing surface disturbance related to previous exploration activities. The peripheral area where operational disturbance may occur measures 14.2 acres. An existing dirt access road is proposed to be widened from 12 to 15 feet in five discrete segments, creating 0.08 acre of disturbance. Current and proposed surface disturbance within the Project Area would total approximately 34.48 acres. The existing and proposed disturbance is outlined by each type of activity in Table 2.1-1.

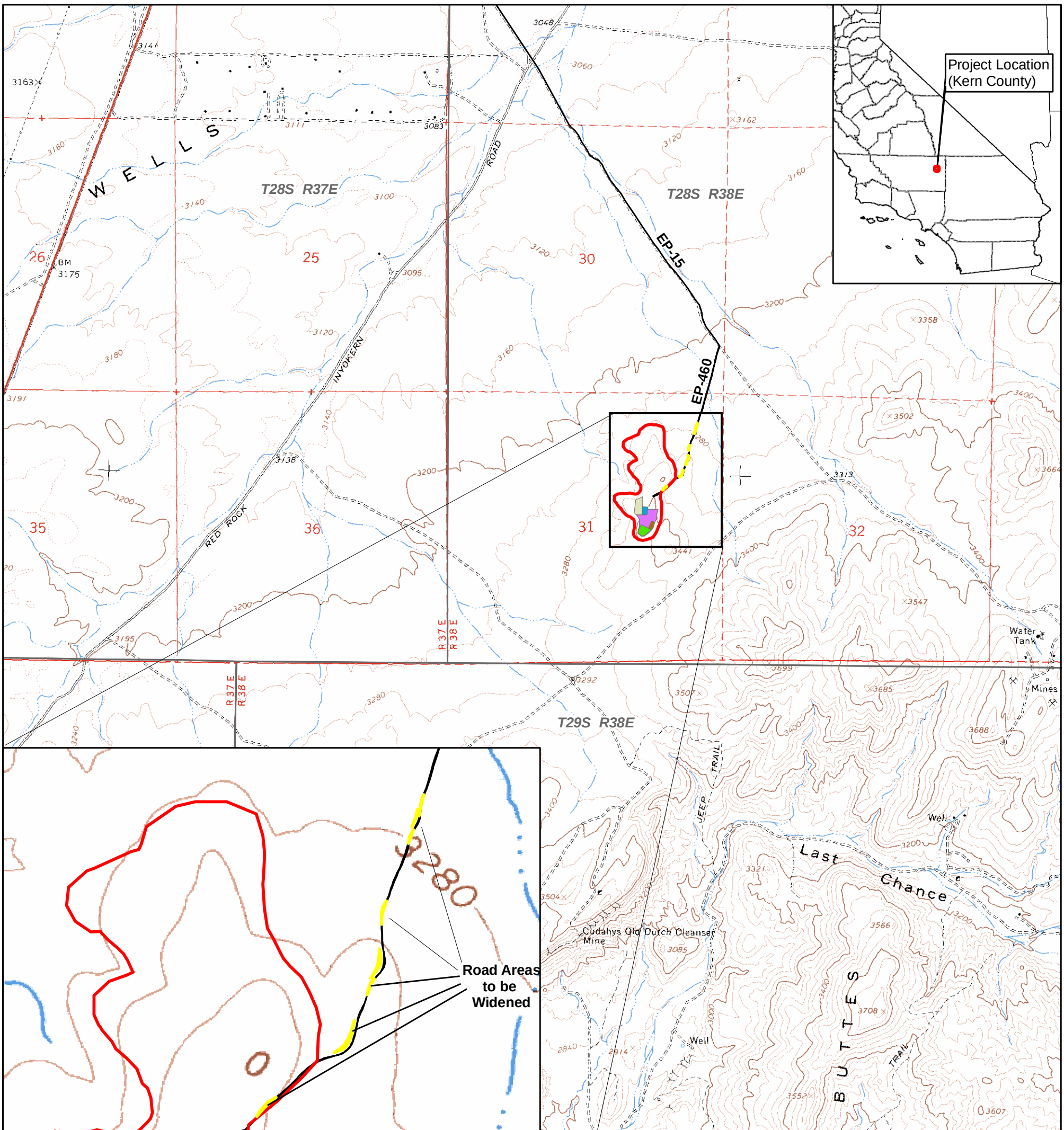
Table 2.1-1: Acreage of Existing and Proposed Project Disturbance

Component	Surface Disturbance (acres)		
	Existing Disturbance Exploration (CACA-48524)	Proposed Disturbance	Total
Opaline Silica Cap Rock	0.35	19.85	20.20
Peripheral Operational Disturbance	0.00	14.20	14.20
Widen Access Road	0.00	0.08	0.08
Total	**0.35**	**34.13**	**34.48**

The pozzolan deposit is in the form of a flat lying bed, measuring nine to 12 feet thick, located on a hill top. A single bench would be mined from the hill top quarry (cap rock). It is estimated that an average of approximately 30,000 up to a maximum of 100,000 tons of material would be processed each year from the Project, over a Project life span of up to 20 years.

A 30,000 ton annual production rate was the minimum tonnage that justified the use of a portable crushing plant. The 100,000 ton annual production rate was determined to be the highest possible amount of material to be crushed in one year. However, the actual annual crush would be driven by market demand and the economic climate, and there may be idle years where no crushing would occur. Therefore, the timeline for the depletion of the deposit could change depending on the annual crushing rate. Given the reserves of approximately 420,000 tons, the deposit could be depleted in approximately 4.2 years, at a maximum production rate of 100,000 tons per year (tpy). However, for this Project, it is anticipated that mining would most likely occur at the lower rates (approximately 30,000 tpy) with possible idle time. This would result in a Project life of up to the proposed 20-year period. Production levels would be monitored on a monthly basis to ensure compliance with idle mine status.

The mining activities would occur in up to nine phases. During each phase, approximately 30,000 to 50,000 tons of rock would be drilled, blasted, crushed, and stockpiled. All Phase I proposed activities within the Project Area are shown on Figures 2.1.1a and 2.1.1b.



Explanation

- Project Area (Area to be Mined and Reclaimed)
- Phase I
- Topsoil Storage
- Test Plot Area
- Initial Stockpile Area
- Portable Crushing Plant
- Existing Access Road
- Road Areas to be Widened

0 1,000 2,000 Feet

Projection: UTM Zone 11 North, NAD83

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Project Facilities and Roads Map

Figure 2.1.1a

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T28S R37E

T28S R38E

T29S R38E

EP-15

EP-460

Project Location
(Kern County)

Road Areas
to be
Widened

Initial Stockpile
Area

Portable Crushing Plant -
Existing 0.35 Acre Disturbed Site
Including Equipment Storage

Phase I
50,000 Tons

Topsoil Storage

Test Plot Area

0 500
Feet

Explanation

- Project Area (Area to be Mined and Reclaimed)
- Phase I
- Topsoil Storage
- Test Plot Area
- Initial Stockpile Area
- Portable Crushing Plant
- Existing Access Road
- Road Areas to be Widened

0 1,000 2,000
Feet

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Project Facilities and Roads Map

Figure 2.1.1b

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2.1.1 Location and Access

The Project is located approximately 10.5 miles south of the Freeman Junction and 17 miles southwest of the City of Inyokern, California. CalPortland would use the existing dirt access roads, which can be accessed from SR 14. From SR 14, a turn-off near Mile Marker 50 is the Burro Schmidt Tunnel Road/Last Chance Canyon Road (BLM Route EP-15), a BLM maintained road. This road would be travelled for approximately 1.7 miles before intersecting with Red Rock Inyokern Road and continues another 1.2 miles before the turn-off onto the existing dirt access road that leads to the Project Area (BLM Route EP-460). This access road would be travelled for approximately 0.64 mile (3,386 feet) southwest to the Project Area.

2.1.2 Equipment

The following list of support vehicles and equipment is expected to be used at some point in the life of the Project:

- Up to two Crawler drill(s), IR ECM-620, or equivalent;
- One D-6 Dozer or equivalent;
- One motor grader;
- One water truck;
- One portable crushing plant;
- Up to four service vehicles/pickup trucks;
- One Cat 988 Loader or equivalent; and
- Triple-axle highway trucks.

All equipment would be properly muffled and equipped with suitable and necessary fire suppression equipment, such as fire extinguishers and hand tools. A water truck at the Project Area would be used in the event of a fire. All portable equipment and support vehicles would be removed from the Project Area during extended periods of non-operation. All Project-related traffic would observe prudent speed limits to enhance public safety, protect wildlife and livestock, and minimize dust emissions.

2.1.3 Proposed Mining Activities

During each phase approximately 30,000 to 50,000 tons of rock would be drilled, blasted, crushed, and stockpiled until a maximum of 420,000 tons of material have been mined. CalPortland would contract the drilling and blasting activities for the Project to a California licensed drilling and blasting contractor. Drilling would require nine to 15 days per phase, and would utilize a track-mounted crawler drill. The shots would consist of 100 to 150 holes each with a 2.5- to three-inch diameter. The opaline silica being mined measures nine to 12 feet thick, which would yield approximately 10,000 tons per shot. The blasting materials would typically be ammonium nitrate and fuel oil (ANFO), blasting caps and cast boosters using either a nonel or an electric detonating system utilizing surface delays. Blasting practices and procedures continue to improve throughout time and CalPortland reserves the right to modify the blasting practices to improve or update the blasting procedures and types of explosives. Also, unforeseen circumstances such as, manufacturing shortages of certain materials may require changes in the blasting procedure. Once the material has been blasted, a loader would feed the shot material to

the portable crushing plant. All activities would be conducted in conformance with applicable federal and state health and safety requirements.

2.1.4 Material Processing

CalPortland would contract the crushing and stockpiling of the material to a California licensed contractor operating a permitted portable crushing system. Crushing would be conducted on site within the area defined by the perimeter of the opaline silica cap rock as shown in Figures 2.1.1a and 2.1.1b. A loader would transport the shot rock from the blast site to the feed hopper of the portable crusher. The crushed material would be conveyed to a finished material stockpile. Crushing would require approximately one week per 10,000 tons, or typically three to five weeks per mining phase. Crushing would be conducted on an annual or biannual cycle with the crusher removed from the Project Area during the interim periods. The initial (Phase 1) location of the portable crushing plant is shown on Figures 2.1.1a and 2.1.1b. The following mining phases would place the crusher on the previous mining phase disturbance closest to the new material that would be mined. CalPortland would notify the County and the BLM in the event of a temporary closure of the mining or material processing activities and ensure that the Project site is safe and secure.

No utilities would be constructed on the Project site. The equipment and crusher would be operated on diesel fuel. All crushed material would be transported to the CalPortland Mojave Cement Plant. No solid or liquid mine waste would be generated as part of this Project.

2.1.5 Access Road Maintenance

No new roads would be constructed; however, a grader would perform maintenance on the three miles of access roads to the Project Area, as needed. The roads would only be maintained for safe passage. Maintenance would include smoothing ruts, bumps, and washouts created by seasonal storms. BLM Route EP-15 would not be widened as part of the Project. However, the 0.64 mile portion of BLM Route EP-460 would be widened from the existing 12 foot width to 15 feet, in five discrete segments (0.08 acre), to allow the lowboy trailer, which would be used to deliver the portable crusher to the Project Area, to negotiate the curves in the road at those locations (Figures 2.1.1a and 2.1.1b). The widening would be kept to a minimum and would avoid all identified cultural sites.

2.1.6 Work Force

The work force for the Project may include the following at any one time: ten employees during truck loading activities; four employees during blasting activities; five employees during crushing activities; two supervisors; and one monitor.

2.1.7 Water Use

The Project would require an average of 4,000 to 12,000 gallons of water per day, primarily for dust control along the access roads during the hauling campaigns. Water used during crushing, stockpiling, and hauling would range between one to three truckloads per day. It is anticipated that water would be supplied by water truck from CalPortland's Mojave cement plant. If a water source from a site closer to the Project Area becomes available, CalPortland would acquire the

appropriate documentation for the use of that water source. Water usage would be minimal during drilling and blasting activities and would be supplied by the driller from a trailer mounted tank. When crushing, CalPortland would have a portable tank on site. The tank would be maintained by the crushing contractor. There would be no surplus water or waste water during the life of the Project.

2.1.8 Solid and Hazardous Materials

On-site fueling of the off-road equipment (crawler drill, dozer, loader, grader, water truck, and portable crushing plant) would be done from a portable diesel tank, with an up to 100-gallon capacity, stored in the equipment staging area. All other vehicles would be fueled off site. In the event of an identified and reportable quantity spill of hazardous or regulated material occur, such as diesel fuel, measures would be taken to control and clean up the spill, and notifications would be made to the appropriate agencies. Contractors would maintain spill kits on site for use in case of a spill. In addition, CalPortland has a Spill Contingency Plan that would be implemented in the event of a spill.

All nonhazardous refuse generated by the Project would be disposed of off site at an authorized landfill facility consistent with applicable regulations. No refuse would be disposed of within the Project Area. Sewage requirements would be met by the use of portable toilets, which would be serviced by an independent contractor.

2.1.9 Reclamation

Reclamation would be completed, at a minimum, to the standards described in 43 CFR 3809.420, SMARA Sections 3704 and 3502 (b)(3), Kern County Zoning Ordinance Section 19.100, and the information contained within the approved reclamation plan for the Project. Reclamation would meet the reclamation objectives as outlined in the United States Department of Interior Solid Minerals Reclamation Handbook #H-3042-1, Surface Management of Mining Operations Handbook H-3809-1, and revegetation success standards per BLM and SMARA regulations. Reclamation would consist of grading the surface to mimic the surrounding terrain and ripping to facilitate seed and water collection in the depressions. The resulting surface would appear similar to the original surface in orientation and appearance, but would be softer and more porous than the original.

Reclamation would be conducted concurrently with the mining, where practicable, after the material excavation is completed. Based on the planned phasing of the mining activities, some areas would not be reclaimed concurrently if they would be subject to further disturbance (i.e., location of portable crusher or stockpiles). However, CalPortland would minimize the total area of unreclaimed areas throughout the life of the Project. If necessary, filter fabric, certified weed-free straw, or mulch would be used to stabilize exposed soils. The final grading for the reclamation work would be completed within one month of completion of the hauling. No interim or final slopes would exceed 2 Horizontal:1 Vertical (2H:1V).

Revegetation activities are limited by the time of year during which they can be effectively implemented. Site conditions or yearly climatic variations may require that this schedule be modified to achieve revegetation success. Seeding activities would be timed to take advantage of

optimal climatic periods and would be coordinated with other reclamation activities and would use the BLM-recommended seed mix in Table 2.1-2.

In general, earthwork and seedbed preparation would be completed in the summer or early fall. Grasses and herbs would be seeded between November and March to coincide with the wet season. The seeding would be completed using a broadcast method and then raked. The reclaimed surfaces would be left in a textured or rough condition (small humps, pits, etc.). Broadcast seed application would be at the rate of approximately 67 pounds of pure live seed per acre. Only certified weed-free seed would be used for reclamation seeding. Reclamation activities would be coordinated with the County and the BLM, as necessary.

Site monitoring for stability and revegetation success would be conducted once a year, during the spring or fall, for a minimum of three years until attainment of the revegetation standards. Where it has been determined that revegetation success has not been met, the County, the BLM, and the operator would meet to decide on the best course of actions necessary to meet the reclamation goal.

Table 2.1-2: BLM-Recommended Seed Mix

Common Name	Scientific Name	Pure Live Seed (Pounds/Acre)
Four-wing Saltbush	*Atriplex canescens*	24
Indian rice grass	*Achnatherum hymenoides*	30
Desert saltbush	*Atriplex spinifera*	9
Desert needlegrass	*Achnatherum speciosum*	4
	Total Application Rate	**67.0**

[1] = Pure Live Seed

The goal of CalPortland is to return the Project Area to a natural, safe, maintenance-free condition. Reclamation activities would be designed to achieve post mining land uses consistent with the BLM's land use management plans for the area, which are outlined in the BLM's West Mojave Resource Management Plan Amendment (BLM 2003). Post-mining land use would be open space/wildlife habitat.

Post-closure management would commence on any reclaimed area following completion of the reclamation work for the area. Post-closure management would extend until the reclamation of the site or component has been accepted by both the County and the BLM. For sites reclaimed early in the operations, management of the reclaimed sites would occur concurrently with operational site management. Annual reports showing reclamation progress would be submitted to the BLM and the County.

2.1.10 Environmental Protection Measures

CalPortland would commit to the following environmental protection measures as part of the Proposed Action to prevent unnecessary or undue degradation during construction, operation, and reclamation of the Project. The measures are derived from the general requirements established in the BLM's Surface Management Regulations at 43 CFR 3809 and SMARA Sections 3503(c) and 3703, as well as other water and air quality regulations.

Air Quality

- Air permits have been obtained from EKAPCD for the crushing plant (Registration #124859) and generator (Registration #124540) and all stipulations would be followed.

- Emissions of fugitive dust from disturbed surfaces would be minimized by utilizing appropriate control measures. Surface application of water from a water truck and speed limit controls are the proposed methods of dust control.

Cultural Resources and Paleontological Resources

- Pursuant to 43 CFR 10.4(g), CalPortland would notify the BLM authorized officer, by telephone, and with written confirmation, immediately upon the discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony (as defined in 43 CFR 10.2). Further pursuant to 43 CFR 10.4 (c) and (d), the operator would immediately stop all activities in the vicinity of the discovery and not commence again for 30 days or when notified to proceed by the BLM authorized officer.

- CalPortland would not knowingly disturb, alter, injure, or destroy any scientifically important paleontological deposits. If CalPortland discovers any scientifically important paleontological resource that might be altered or destroyed by operations, the discovery would be left intact and reported to the authorized BLM officer.

- CalPortland would avoid or mitigate any eligible or unevaluated historical or archaeological site, structure, building, or object. If CalPortland discovers any cultural resource that might be altered or destroyed by operations, the discovery would be left intact and reported to the authorized BLM officer.

- Any survey monuments, witness corners, or reference monuments would be protected to the extent economically and technically feasible. In the event of monument obliteration, CalPortland would immediately report the incident, in writing, to the Authorized Officer and the respective installing authority.

Migratory Birds

- To prevent undue harm to migratory birds protected under the Migratory Bird Treaty Act of 1918 (MBTA), Project activities would be scheduled outside bird breeding season if possible. In upland desert habitats and ephemeral washes containing upland species, the migratory bird breeding season generally occurs between March 1 and July 30. If the Project activities would alter any breeding habitat during the migratory bird breeding season, then a qualified biologist would survey the Project Area for nests prior to commencement of surface disturbing activities. This would include a survey for burrowing and ground nesting species in addition to those nesting in vegetation. If any active nests (containing eggs or young) are found, a 250-foot buffer, or other size buffer depending on the habitat requirements of the species established by a contractor in consultation with the BLM, would be avoided by CalPortland until the young birds fledge.

Recreation and Public Safety

- Public safety would be maintained throughout the life of the Project. All equipment and other facilities would be maintained in a safe and orderly manner.

- To limit the exposure of visitors to mining activities in the recreation areas adjacent to the Project Area, truck traffic would not occur during the following days: the entire Thanksgiving week until the following Monday; the day before Christmas until the Monday following New Year's Eve; and Friday through Monday for Martin Luther King, Jr. weekend, Presidents' weekend, Easter weekend, Memorial Day weekend, Columbus Day weekend, and Veteran's Day weekend if Veteran's Day occurs on a Monday or Friday.

- Signs would be posted to inform visitors of truck traffic during regular truck operation times.

- In coordination with the BLM, CalPortland would install signs along BLM Route EP-460 restricting access to the Project Area.

Soil and Water Resources

- A Storm Water Pollution Prevention Plan (SWPPP) would be implemented to control sedimentation from the Project disturbance. Best Management Practices (BMPs) would be installed to manage stockpile areas and other disturbed surfaces. Sediment control structures could include, but not be limited to, fabric and/or weed-free straw filter fences, siltation or filter berms, and downgradient drainage channels in order to prevent unnecessary or undue degradation to the environment.

- Driving on access roads that cross ephemeral washes would be prohibited when running water is present.

Special Status Species and Wildlife

- CalPortland would pay a 1:1 mitigation fee to the BLM for wildlife habitat mitigation based on the stipulations provided in the West Mojave Plan.

- In addition to the measures outlined below for desert tortoise, CalPortland would obtain an Incidental Take Permit (2081 Permit) for desert tortoise, if required by the CDFG.

<u>USFWS-Approved Desert Tortoise Protection Measures (from Biological Opinion #81440-2011-F-0342 dated December 23, 2011 [USFWS 2011])</u>

- CalPortland would designate a field contact representative (FCR) who is responsible for overseeing compliance with protective stipulations for the desert tortoise and for coordination on compliance with the BLM. The FCR would halt all mining activities that are in violation of the stipulations. The FCR would have a copy of the stipulations when on the site. The FCR may be the mine operator, the mine manager, any other mine employees, or a contracted biologist.

- CalPortland would develop a desert tortoise education program for all workers using the site. The BLM would approve the employee education program prior to the presentation of the program to the mine workers. The program may consist of a class or video presented by an authorized biologist All Project personnel would participate in the employee education program prior to initiation of mining activities. The operator is responsible for ensuring that the education program is developed and presented prior to conducting activities. New employees would receive formal, approved training prior to working onsite. The program would cover the following topics regarding desert tortoise: distribution; general behavior and ecology; sensitivity to human activities; legal protection; penalties for violation of federal or state laws; reporting requirements; and project protective mitigation measures.

- Only biologists authorized by the USFWS and the BLM would handle desert tortoises. The BLM would submit the name(s) of the proposed authorized biologist(s) to the USFWS for review and approval at least 30 days prior to the onset of activities. No mining activities would begin until the approval of the authorized biologist(s). The authorized biologist(s) would follow the protocols outlined in chapter 7 of the *Desert Tortoise Field Manual* (USFWS 2009) for handling and marking desert tortoises.

- An authorized biologist would be required on site during the initial surface-disturbing activities. The authorized biologist would have authority from the operator to halt any action that may injure or kill a desert tortoise.

- Disturbance would occur in the smallest practical area, considering topography, placement of facilities, location of burrows, public health and safety, and other limiting factors. Work area boundaries delimited with flagging or other marking would minimize surface disturbance associated with vehicle straying. Workers would avoid special habitat features, such as burrows, as identified by the authorized biologist. Stockpiling of materials, storage of equipment, and parking of vehicles would occur in previously disturbed areas to the greatest extent possible. The authorized biologist, in consultation with the Project proponent, would ensure compliance with this measure.

- Cross-country vehicle use during work hours and non-work hours would occur only when necessary and as required by the plan of operations.

- Desert tortoise exclusion fencing constructed under the direction of an authorized biologist would enclose all temporary and long-term disturbance areas and avoid all desert tortoise burrows to the extent possible. (The definition of “long-term” is approximately 20 years, the anticipated life of the Project). CalPortland would construct the fence according to the protocols provided in chapter 8 of the Desert Tortoise Field Manual (USFWS 2009). CalPortland would construct the mine gate to exclude desert tortoises when closed. This gate would remain closed except for the immediate passage of vehicles. To ensure its integrity, CalPortland would check the fence at least monthly and after major storm events (events that may cause debris buildup that may bury the fence and/or cause gullying under the fence) and provide immediate maintenance, as needed. If the fence remains in a dilapidated state for more than a week, additional desert tortoise surveys may be required to ensure that no desert tortoises have entered the site during the time that the fence was in disrepair.

- After exclusion fence installation, the authorized biologist would conduct a thorough survey for desert tortoises within the mine site. The authorized biologist would mark desert tortoises for future reference and translocate all desert tortoises from the exclosure to the outside of an adjacent fence. The authorized biologist would follow the protocols provided in chapter 7 of the *Desert Tortoise Field Manual* (USFWS 2009) for marking and translocating desert tortoises.

- Except on paved roads, vehicle speeds would not exceed 20 miles per hour through desert tortoise habitat.

- If a worker needs to park temporarily outside of the cleared exclosure, the worker would inspect for tortoises under the vehicle prior to moving it. If a desert tortoise is observed under the vehicle, workers would only move the vehicle after the desert tortoise leaves on its own accord or the authorized biologist determines that doing so would not injure or kill the desert tortoise.

- CalPortland would not allow dogs on the mine site. This excludes dogs that are not within the control of CalPortland workers. However, when possible, CalPortland would remove any loose dogs found within the mine area and turn them over to local animal control.

- All trash and food items would be promptly contained within closed, common raven-proof containers. CalPortland would remove containers regularly from the Project site to reduce the attractiveness of the area to common ravens (*Corvus corax*) and other desert tortoise predators. Project workers would secure vehicle loads to prevent litter from blowing out along the road.

- CalPortland workers would remove any road kill found along access roads or near the Project site. Workers would not allow water to accumulate in puddles during dust suppression.

- Except as specifically stated in the plan of operations, CalPortland would not allow the construction of unauthorized structures that may function as nesting or perching sites for common raven. The project proponent would describe any proposed structures to the BLM during initial Project review.

- A USFWS-approved weed management plan would be developed and implemented to minimize the introduction of nonnative weed species. To minimize the introduction of nonnative weeds, CalPortland would clean earth-moving equipment prior to transport to the Project site. Weed-seed free rice straw or other certified weed-seed free straw is required for erosion control. CalPortland would promptly eliminate nonnative weed species inadvertently introduced onto the site during mining activities using methods approved by the BLM and USFWS.

- Due to the location of this Project within the range of the desert tortoise, associated infrastructure, and the increase in human activities that would occur if this Project is approved, a corresponding increase in the presence of common ravens and predation on desert tortoises is anticipated. Because it is not possible to exclude completely common ravens from using Project infrastructure, it is appropriate to calculate the contribution of

each Project to the regional common raven management plan based on the total area required for the development of the Project. These funds are used to carry out the primary actions of the management plan. With the assistance of the National Fish and Wildlife Foundation, who would be holding and managing the funds to implement the management plan, the USFWS and CDFG calculated the equitable contribution for projects that are expected to increase common raven presence and predation on the desert tortoise. This was accomplished by using modeling tools to determine a per-acre contribution for projects with permit terms of 20 or 30 years. The amount for a 20-year project is $64.00 per acre. Therefore, if this Project disturbs 34.48 acres, then the amount to be paid is $2,206.72.

Burrowing Owl

- CalPortland would avoid disturbing occupied burrows within 50 meters (or approximately 160 feet) during the non-breeding season of September 1 through January 31, and within 75 meters (approximately 250 feet) during the breeding season of February 1 through August 31. A minimum of 6.5 acres of foraging habitat would be preserved contiguous with occupied burrow sites for each pair of breeding burrowing owls (with or without dependent young) or single unpaired resident birds. This measure would be applied based on measures from the Burrowing Owl Survey Protocol and Mitigation Guidelines (California Burrowing Owl Consortium 1993).

Mohave Ground Squirrel

- Since the Project Area contains potential habitat for the MGS and an individual was observed along BLM Route EP-460 by a BLM biologist, CalPortland would work with the CDFG to obtain an Incidental Take Permit (2081 Permit) for the MGS, if necessary.

Joshua Tree and Mojave Fish-Hook Cactus

- Any Joshua Tree within the Project Area would be avoided. Any Mojave fish-hook cactus identified in the Project Area would be avoided if possible, or removed and given to a BLM biologist for transplanting.

Survey Monuments

- Any survey monuments, witness corners, or reference monuments would be protected to the extent economically and technically feasible. In the event of monument obliteration, CalPortland would immediately report the incident, in writing, to the Authorized Officer and the respective installing authority.

Vegetation

- Reclamation would occur following each phase of mining which would include recontouring, ripping, and reseeding.

2.2 No Action Alternative

In accordance with BLM NEPA guidelines H-1790-1, Chapter V (BLM 1988), this EA evaluates the No Action Alternative, which is a reasonable alternative to the Proposed Action. The objective of the No Action Alternative is to describe the environmental consequences that would result if the Proposed Action were not implemented. The No Action Alternative forms the baseline from which the impacts of the Proposed Action can be measured. Under the No Action Alternative, the activities associated with the Project would not occur. The existing 0.35 acre of surface disturbance would remain until completely revegetated.

2.3 Alternatives Considered but Eliminated from Detailed Study

The following alternatives were considered but eliminated from detailed study: the Alternate Access Route Alternative and the Faster Mining Operations Alternative. The Alternate Access Route Alternative provides access to the Project Area by another unpaved road, or BLM Route EP-0462, just south of the LaPozz lode claims. This road lies partially within the Red Rock Canyon State Park boundaries. This alternative would not be feasible for the following reasons: 1) access by this route is not as direct, resulting in additional air quality impacts from truck travel along unpaved access roads; 2) additional potential impacts to recreation, vegetation, and wildlife would occur by traveling through the Red Rock Canyon State Park; and 3) California Public Resources Code Section 5001.65 states that "commercial exploitation of resources in units of the state park system is prohibited."

The Faster Mining Operations Alternative would reduce the life of the Project from 20 years to 15 years. The amount of pozzolan extracted would be the same as the Proposed Action. This alternative would not be feasible for the following reasons: 1) additional mining would occur during the day which would create potential exceedances of the one-hour air quality emission standards; 2) mining would potentially need to occur during nighttime hours, which would create potential nighttime lighting impacts to nearby recreation areas; and 3) the potential for a hazard to occur through the transport, use, or disposal of hazardous materials would increase by potentially adding additional truck trips throughout the day to deliver the diesel fuel, and potentially increasing the number of vehicles on site.

3 AFFECTED ENVIRONMENT

3.1 Introduction

The purpose of this section of the EA is to describe the existing environment of the Project Area affected by the Proposed Action or alternatives under consideration.

Supplemental Authorities that are subject to requirements specified by statute or Executive Order (EO) must be considered in all BLM environmental documents. The 14 elements associated with the supplemental authorities listed in the NEPA Handbook (BLM 2008, Appendix 1) are listed in Table 3.1-1. The table lists the elements and their status in the Project Area as well as the rationale to determine whether the element is present in the Project Area, and if the element would be affected by the Proposed Action. Supplemental Authorities that may be affected by the Proposed Action are analyzed in Chapter 4.

Table 3.1-1: Elements Associated with Supplemental Authorities and Rationale for Detailed Analysis for the Proposed Action

Supplemental Authority Element	Not Present/ Not Affected	Present/ Not Affected	Present/ Potentially Affected	Rationale/Reference Section
Air Quality and Atmospheric Values			X	See Section 3.1.1.
Areas of Critical Environmental Concern (ACEC)	X			This element is not present within the Project Area or vicinity and is not further analyzed in this EA.
Cultural Resources		X		See Section 3.1.2.
Environmental Justice	X			Based on the results of existing baseline data, environmental justice concerns were not identified in relation to the Project. This element is not analyzed in this EA, but is discussed below.
Farm Lands (Prime or Unique)	X			This element is not present within the Project Area or vicinity and is not further analyzed in this EA.
Fish Habitat	X			This element is not present within the Project Area or vicinity and is not further analyzed in this EA.
Floodplains		X		See Section 3.1.3.
Forest and Rangelands (Healthy Forest Restoration Act [HFRA] projects only)	X			This project does not meet the requirements to qualify as an HFRA project.
Human Health and Safety (Herbicide projects)	X			This project is not proposing to use herbicides; therefore, EO 13045 does not apply.
Migratory Birds			X	See Section 3.1.7.
Native American Religious Concerns		TBD	TBD	See Section 3.1.8.
Noxious Weeds, Invasive and Nonnative Species	X			Based on the results of existing baseline data, noxious weeds, invasive, and nonnative species were not identified in

Supplemental Authority Element	Not Present/ Not Affected	Present/ Not Affected	Present/ Potentially Affected	Rationale/Reference Section
				the Project Area. This element is not analyzed in this EA, but is discussed below.
Threatened or Endangered Species			X	See Section 3.1.14.
Wastes, Hazardous or Solid		X		See Section 3.1.18.
Water Quality - Surface and Ground		X		See Section 3.1.19.
Wetlands and Riparian Zones	X			This element is not present within the Project Area or vicinity and is not further analyzed in this EA.
Wild and Scenic Rivers	X			This element is not present within the Project Area or vicinity and is not further analyzed in this EA.
Wilderness	X			The Project Area is not located within a designated wilderness area, but is located near the El Paso Mountains Wilderness. This element is not analyzed in this EA, but is discussed below.

Those elements listed under the supplemental authorities that do not occur in the Project Area and would not be affected are not discussed further in this EA. The elimination of nonrelevant issues follows the Council on Environmental Quality (CEQ) policy, as stated in 40 CFR 1500.4. The supplemental authorities that were internally scoped by the BLM for discussion in the EA but would not be affected by the Proposed Action include the following: Environmental Justice; Noxious Weeds, Invasive and Nonnative Species; and Wilderness.

Environmental Justice

On February 11, 1994, President William Clinton issued EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. In April of 1995, the EPA released the document titled *Environmental Justice Strategy: Executive Order 12898*. The document established EPA-wide goals and defined the approaches by which the EPA would ensure that disproportionately high and adverse human health or environmental effects on minority communities and low-income communities are identified and addressed.

According to the 2010 United States Census, the American Indian and Hispanic populations constitute approximately 1.8 percent and 47.9 percent, respectively, of the total population of Kern County. Black, Asian, and Pacific Islanders comprise 6.5, 4.1, and 0.2 percent, respectively, of Kern County's population (U.S. Census Bureau 2011).

For California as a whole, American Indian and Hispanic persons made up 1.2 and 37 percent, respectively, of the population in 2009. Black, Asian, and Pacific Islanders constituted 6.6, 12.7, and 0.4 percent of the population, respectively in the State of California in 2009 (U.S. Census Bureau 2011).

In accordance with EPA's Environmental Justice Guidelines (EPA 1998), minority populations should be identified when either of the following exists:

- The minority population of the affected area exceeds 50 percent; or
- The minority population of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

Populations of American Indians, Hispanics, Blacks, Asians, or Pacific Islanders do not exceed 50 percent of the population for Kern County. Although persons of American Indian heritage constitute a higher percentage of the total population within Kern County than the minority population in the State of California, the Project Area is located on BLM-administered lands and private lands in a predominantly vacant and rural area. Since the vicinity of the Project Area is predominantly undeveloped and unpopulated, the minority population is not considered meaningfully greater than the percentage for the State of California as a whole. Therefore, for the purposes of screening for environmental justice concerns, the identified populations defined in EPA's guidance (EPA 1998) do not exist within the Project Area.

The median household incomes in the County and the State of California in 2008 were $44,716 and $61,017, respectively (U.S. Census Bureau 2011). The percentage of individuals below the poverty level in 2008 in the County and the State of California was 20.5 and 13.3 percent, respectively (U.S. Census Bureau 2011). The median income in Kern County was lower than for the state as a whole in 2008 and the 2008 poverty rates were higher; however, the environmental impacts associated with the Proposed Action would not fall disproportionately on a specific minority and/or low income group of the community and/or tribal resources. Therefore, for the purposes of screening for environmental justice concerns, the Proposed Action would not result in impacts to environmental justice. Therefore, this element is not analyzed in this EA.

Noxious Weeds, Invasive and Nonnative Species

The BLM defines a noxious weed as, “a plant that interferes with management objectives for a given area of land at a given point in time.” The California Desert District RFO recognizes the current noxious weed list designated by the State of California Department of Food and Agriculture, Section 5004 of the Food and Agricultural Code, found at http://www.cdfa.ca.gov/phpps/ipc/encycloweedia/pdf/winfo_ca_code_of_regulations.pdf. An invasive species is defined as a nonnative or alien plant or animal that has entered into an ecosystem. Invasive species are likely to cause economic harm or harm to human health (EO 13112). Noxious weeds, invasive and nonnative species are highly competitive, aggressive and easily spread. In addition, the BLM follows all Federal Noxious and Invasive Weed Laws, EO 11312 (Prevention and Control of Invasive Species) and various BLM Manuals.

A vegetation survey was conducted on April 4, 2010. There were no noxious weeds, invasive, or nonnative species identified in the Project Area during the survey. This element is not analyzed in this EA.

Wilderness

The Project Area is located near, but not directly adjacent to, the El Paso Mountains Wilderness (P.L. 103-433), which encompasses 23,669 acres, and is managed by the BLM, but may contain private lands within the wilderness area. This wilderness is distinguished by numerous reddish-colored buttes and dark, uplifted volcanic mesas dissected by narrow canyons. Badlands topography surrounds Black Mountain, the central feature of this wilderness. Wildlife includes raptors, MGS, and desert tortoise. Vegetation primarily consists of the creosote bush scrub community with Joshua trees on the western side of the mountain. The southern portion of the wilderness is included in the Last Chance Archaeological District and is listed on the NRHP. Since the Project Area is not located within a designated wilderness, this element is not analyzed in this EA.

In addition to the elements listed under supplemental authorities, the BLM considers other resources and uses that occur on public lands and the issues that may result from the implementation of the Proposed Action. Other resources or uses of the human environment that have been considered for this EA are listed in Table 3.1-2 below. Resources or uses that may be affected by the Proposed Action are analyzed in Section 3.2.

Table 3.1-2: Additional Affected Resources

Other Resources or Uses	Not Present	Present/ Not Affected	Present/ Potentially Affected	Rationale/Reference Section
Fuels, Fire Management	X			Use not present.
Geology and Mineral Resources			X	See Section 3.1.4.
Land Use, Realty, and Access		X		See Section 3.1.5.
Livestock Grazing		X		See Section 3.1.6.
Paleontological Resources	X			Based on existing baseline data, paleontological resources were not identified in the Project Area. This element is not analyzed in this EA, but is discussed below.
Recreation			X	See Section 3.1.11.
Socioeconomic Values		X		See Section 3.1.12.
Soils		X		See Section 3.1.13.
Special Status Species (Plants and Wildlife)			X	See Section 3.1.14.
Vegetation			X	See Section 3.1.16.
Visual Resources		X		See Section 3.1.17.
Wild Horses and Burros	X			Based on existing data, wild horses and burros are not known to occur in the Project Area. In addition, the Project Area is not located within a Herd Management Area (HMA). This element is not analyzed in this EA, but is discussed below.
Wildlife			X	See Section 3.1.22.

Those elements listed under the additional affected resources that do not occur in the Project Area and would not be affected are not discussed further in this EA. The elimination of nonrelevant issues follows the CEQ policy, as stated in 40 CFR 1500.4. The additional affected resources that were internally scoped by the BLM for discussion in the EA but would not be affected by the Proposed Action include the following: paleontological resources; visual resources; and wild horses and burros.

Paleontological Resources

The BLM manages paleontological resources under a number of federal laws including the following: FLPMA Sections 310 and 302(b), which direct the BLM to manage public lands to protect the quality of scientific and other values; 43 CFR 8365.1-5, which prohibits the willful disturbance, removal, and destruction of scientific resources or natural objects; 43 CFR 3622, which regulates the amount of petrified wood that can be collected for personal, noncommercial purposes without a permit; and 43 CFR 3809.420 (b)(8), which stipulates that a mining operator "shall not knowingly disturb, alter, injure, or destroy and scientifically important paleontological remains or any historical or archaeological site, structure, building or object on Federal lands." In addition, the Paleontological Resources Preservation Act, or Title VI of the Omnibus Public Land Management Act of 2009 (Public Law [P.L.] 111-11), establishes stronger penalties than previously required for the non-permitted removal of scientifically significant fossils from federal lands.

The CFR 3809 regulations list only vertebrate fossils as critically important. No vertebrate fossils have been found in the Project Area, and the geologic formations in the Project Area (Ricardo Group) are not expected to include vertebrate fossils, particularly the opaline silica that would be removed (Dibblee and Gay 1952); therefore, no impacts to significant paleontological resources are anticipated. The surficial nature of the disturbance would minimize potential impacts to paleontological resources. Therefore, paleontological resources are not analyzed in this EA.

Socioeconomic Values

The Project Area is located in Kern County, about 17 miles southwest of the town of Inyokern, California. Kern County is located in the southern portion of California, just north of Los Angeles County, and encompasses approximately 8,132 square miles. Approximately 26 percent of the land in the county is managed by the state or federal government.

Interstate 5 (I-5) traverses the county in north-south direction near the western edge. U.S. Highway 395, which runs north to south, passes through the northeastern edge of the County, near the town of Inyokern.

According to the United States Census Bureau, the estimated 2009 population of the County was 807,407, a 22 percent increase from 2000 (approximately 661,649) (U.S. Census Bureau 2010). The majority of the County's residents live in the incorporated city and County seat of Bakersfield. The population in the city of Bakersfield in 2009 was estimated to be 324,463 (U.S. Census Bureau 2010). The city of Bakersfield provides a variety of retail, restaurant, and lodging options as well as government services.

Agriculture and oil provide the major economic base for the County.

The median household income in the County in 2008 was $44,716 annually (U.S. Census Bureau 2010). The majority of job-related income is derived from service-related industries (CA Employment Development Department [EDD] 2010a). The unemployment rate in the County was 16.2 percent in December 2010 (EDD 2010b), which was 3.9 percent higher than the State of California as a whole at 12.3 percent (EDD 2010b).

The workforce required to operate the mine and related facilities over the 20-year life span of the Project would include as many as 22 individuals in a given day. The workers would most likely live in Ridgecrest in the eastern edge of Kern County which would result in beneficial impacts to the local economy, as the workers would obtain lodging, meals, and supplies in the local community. No additional facilities or housing would need to be constructed and the maximum workforce of 22 persons would not be expected to strain the local housing supply, public or private services. Impacts, if any, to socioeconomic values would be beneficial to the local economies. This resource is not analyzed in this EA.

Wild Horses and Burros

The Project Area is not within a Herd Management Area (HMA). The Project Area is approximately 38 miles from the Centennial HMA. In addition, due to the rocky landscape surrounding the Project Area, it is unlikely that wild horses or burros would be present in the vicinity of the Project Area. Therefore, this resource is not analyzed in this EA.

The BLM has used environmental data collected in the Project Area to predict environmental effects that could result from the Proposed Action and alternatives. A level of uncertainty is associated with any sets of data in terms of predicting outcomes, especially when natural systems are involved. The predictions described in this analysis are intended to allow comparison of alternatives to the Proposed Action, as well as provide a method to determine whether activities proposed by the applicant would be expected to comply with applicable regulations.

3.1.1 Air Quality and Atmospheric Values

3.1.1.1 Air Quality

The Project Area is located within the Mojave Desert Air Basin, under the jurisdiction of the Eastern Kern Air Pollution Control District (EKAPCD), formerly the Kern County Air Pollution Control District (KCAPCD). The EKAPCD has three ambient air quality monitoring stations: 923 Poole Street in Mojave (PM_{10} [particulate matter with aerodynamic diameter less than ten microns], $PM_{2.5}$ [particulate matter with aerodynamic diameter less than 2.5 microns], and ozone [O_3]); 100 West California Avenue in Ridgecrest (PM_{10} and $PM_{2.5}$); and a station in Canebrake (PM_{10}).

The United States Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. Table 3.1-3 shows the federal and state standards.

Table 3.1-3: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Primary Federal Standards	California Standards
Ozone (O_3)	1 Hour	-	0.09 ppm
	8 Hour	0.075 ppm	0.070 ppm
Respirable Particulate Matter (PM_{10})	24 Hour	150 µg/m^3	50 µg/m^3
	Annual	-	20 µg/m^3
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	35 µg/m^3	-
	Annual	15 µg/m^3	12 µg/m^3
Carbon Monoxide (CO)	8 Hour	9 ppm	9 ppm
	1 Hour	35 ppm	20 ppm
Nitrogen Dioxide (NO_2)	Annual	53 ppb (100 µg/m^3)	0.030 ppm
	1 Hour	100 ppb (188 µg/m^3)	0.18 ppm
Sulfur Dioxide (SO_2)	24 Hour	-	0.04 ppm
	3 Hour	0.5 ppm	-
	1 Hour	75 ppb (196 µg/m^3)	0.25 ppm
Lead	30 Day Average	-	1.5 µg/m^3
	Calendar Quarter	1.5 µg/m^3	-
	Rolling 3-Month Average	0.15 µg/m^3	-
Visibility Reducing Particles	8 Hour	No federal standards.	Extinction coefficient of 0.23 per kilometer – visibility of ten miles or more due to particles when relative humidity is less than 70 percent.
Sulfates	24 Hour		25 µg/m^3
Hydrogen Sulfide	1 Hour		0.03 ppm
Vinyl Chloride	24 Hour		0.01 ppm

Source: CARB 2010a
Notes: ppm – parts per million; µg/m^3 – micrograms per cubic meter

According to the EKAPCD, the eastern portion of Kern County within the Mojave Desert Air Basin is considered "Unclassifiable" or "Attainment" for all pollutants except for O_3 (8-hour) under federal and state standards, PM_{10} under state standards, and O_3 (1-hour) under state standards is considered "Moderate Nonattainment" (EKAPCD 2011). The Project Area is located within the federal Indian Wells Valley PM_{10} Attainment Maintenance Area, which is required to conform to the State Implementation Plan for PM_{10} and the de minimus standard of 150 tpy.

3.1.1.2 Climate and Meteorology

The Project Area is located in the Mojave Desert on the northern end of the Red Buttes of the El Paso Mountains, between the towns of Inyokern and Randsburg, California. The average maximum temperature in the town of Inyokern, located approximately 17 miles northeast of the Project Area, is 102.7 degrees (°) Fahrenheit (F) in July and the average minimum temperature is 30.2 °F in December. Average precipitation totals approximately 4.17 inches per year and tends to peak in February (WRCC 2010). The elevation of the Project Area ranges from approximately 3,200 to 3,450 feet above mean sea level (amsl).

3.1.1.3 Climate Change

According to the BLM's Instruction Memorandum (IM) No. 2008-171, "Guidance on Incorporating Climate Change into Planning and NEPA Documents," dated August 19, 2008, climate change considerations should be acknowledged in EA documents. The IM states that ongoing scientific research has identified the potential impacts of anthropogenic (man-made) GHG emissions and changes in biological carbon sequestration due to land management activities on global climate. Through complex interactions on a regional and global scale, these GHG emissions and net losses of biological carbon sinks cause a net warming effect of the atmosphere, primarily by decreasing the amount of heat energy radiated by the earth back into space. Although GHG levels have varied for millennia, recent industrialization and burning of fossil carbon sources have caused carbon dioxide equivalent (CO_2(e)) concentrations to increase dramatically, and are likely to contribute to overall global climatic changes. The Intergovernmental Panel on Climate Change recently concluded that "warming of the climate system is unequivocal" and "most of the observed increase in globally average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations."

Several activities contribute to the phenomena of climate change, including emissions of GHGs (especially CO_2 and methane) from fossil fuel development, large wildfires and activities using combustion engines; changes to the natural carbon cycle; and changes to radiative forces and reflectivity (albedo). It is important to note that GHGs have a sustained climatic impact over different temporal scales. For example, recent emissions of CO_2 can influence climate for 100 years. Current emissions within the vicinity of the Project Area include vehicle combustion emissions, fugitive dust from travel on unimproved roads, ranch activities, and wildland fires. Emissions of all pollutants are generally expected to be low due to the extremely limited number of sources in the vicinity of the Project Area.

Existing climate prediction models are global in nature; therefore they are not at the appropriate scale to estimate potential impacts of climate change within the Mojave Desert Air Basin in which the Project is located. Due to the nature and scale of the Project, effects on climate change are not further analyzed in this EA.

3.1.2 Cultural Resources

In 2008, ASM Affiliates (ASM) conducted a Section 106 of the NHPA compliant Class-III intensive pedestrian survey of the LaPozz claim area (ASM 2010). The survey resulted in the identification of eleven cultural resource properties. All but one of the properties were identified as prehistoric lithic scatters, with cryptocrystalline being the dominant lithic material resource. The source of most of this material was associated with a large outcrop of cryptocrystalline rock (CCR) situated within the southern half of the Project Area. The remaining property was a prehistoric lithic quarry. No historic period artifacts or properties were encountered. Eight of the properties identified during the 2008 survey would be avoided by the Proposed Action. Three sites were determined to be within the area of direct impact. In 2011, ASM conducted an additional Class-III recordation and limited testing project to formally evaluate the three sites within the proposed Project Area that could not be avoided by Project activities: the prehistoric quarry site (CA-KER-7290) and two lithic scatter sites (CA-KER-7293 and CA-KER-7294).

The purpose of the 2011 investigation was to further comply with Section 106 of the NHPA, by formally evaluating the potential for sites CA-KER-7290, CA-KER-7293, and CA-KER-7294 to be listed on the NRHP. Sites eligible for listing on the NRHP must meet the following criteria, as established in 36 CFR 60.4.

Eligible Sites Criterion:

A) Are associated with events that have made a significant contribution to the broad patterns of our history;

B) Are associated with the lives of persons significant in our past;

C) Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D) Have yielded, or may be likely to yield, information important in prehistory or history.

The sites identified within the Project Area were recommended as potentially eligible for listing under Criterion D. Eligibility recommendations with respect to Criterion D are based on the ability of a resource to yield archaeological data to provide a better understanding of important regional research questions.

Following the evaluation phase of the survey project, the prehistoric quarry site was determined not to be unique to the area, and did not show intensive utilization or high densities of archaeological material. Additional testing would only likely yield repetitive data sets of information, and the investigation conducted here substantially exhausted the site's research potential. The two small lithic scatters appear to be limited-use lithic reduction locales. Limited testing of the sites revealed that surface recordation had exhausted the data potential for each site. Therefore, sites CA-KER-7290, CA-KER-7293, and CA-KER-7294 are not considered eligible for listing on the NRHP (ASM 2011).

3.1.3 Floodplains

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM), the Project Area does not cross any existing Special Flood Hazard Area (SFHA). However, the existing access road that leads into the Project Area from SR 14 crosses an SFHA with a Zone A designation; specifically the Little Dixie Wash. Areas with a Zone A designation are subject to inundation by the one-percent-annual-chance flood event (FEMA 2010).

3.1.4 Geology and Mineral Resources

The Project Area is located on the northern edge of the El Paso Mountains, north of the Mojave Desert, along the western extent of the Basin and Range Province. The Garlock and El Paso Faults parallel the southern flank of the El Paso Mountains and have uplifted and offset local rock units, some of which are exposed in the Project Area. The Garlock Fault is a major tectonic boundary in the Basin and Range Province (David and Burchfield 1974). Surface geology

exposed in the Project Area includes rocks of the Ricardo Group and alluvium fill. The pozzolan deposit that CalPortland proposes to mine is contained within a nine to 12-foot-thick flat lying horizontal bed of opaline silica.

The Ricardo Group includes the Cudahy Camp and Dove Spring Formations. The Cudahy Camp Formation consists of an approximately 1,476 feet-thick sequence of dominantly volcanic rocks and is unconformably overlain by the Dove Springs Formation. The Project would remove up to a total of 420,000 tons of opaline silica material from the Dove Spring Formation.

The El Paso Mining District contains several historic mine sites and prospects that produced a variety of resources including: gold, silver, copper pumice, and coal (ASM 2009).

3.1.5 Land Use, Realty, and Access

The entire Project Area is located on public lands administered by the BLM Ridgecrest Field Office. Figure 1.1.1 shows the Project Area and land ownership status. Current land use activities in the vicinity of the Project Area consist primarily of mining exploration, wildlife habitat, and dispersed recreation. No rights-of-way (ROWs) are located in the Project Area.

Access to the Project Area would be via SR 14 to Burro Schmidt Tunnel Road, then along three miles of an unnamed existing dirt road (Figure 1.1.1).

3.1.6 Livestock Grazing

The Project Area is located within the Cantil Common Grazing Allotment where up to 13 bands of sheep are grazed. This allotment sustains approximately 5,000 Animal Unit Months (AUMs) with full stocking, available between mid-March and late May. An AUM is the amount of forage needed to sustain one cow and her calf, one horse, or five sheep or goats for a month. There is one band of sheep consisting of approximately 800 ewe/lamb pairs that would utilize the Project access road. However, the ewe/lamb pairs would only travel down the Project access road once per year, as they are required to keep moving and are only allowed one pass through a given site. In addition, they would only do so based on the sufficiency of the spring forage in the area.

No fencing, cattle guards, or other rangeland improvements are present within the Project Area.

3.1.7 Migratory Birds

"Migratory bird" means any bird listed in 50 CFR 10.13. All native birds found commonly in the United States, with the exception of native resident game birds, are protected under the MBTA. The MBTA prohibits taking of migratory birds, their parts, nests, eggs, and nestlings. EO 13186, signed January 10, 2001, directs federal agencies to protect migratory birds by integrating bird conservation principles, measures, and practices.

A migratory bird field survey was conducted for the Project within the Wildlife Survey Area (WSA) May 26 through May 31, 2008. The non-special status migratory bird species that were observed within the Project Area during the wildlife survey include the following: American kestrel (*Falco sparverius*); Ash-throated flycatcher (*Myiarchus cinerascens*); Black-throated sparrow (*Amphispiza bilineata*); Brewer's sparrow (*Spizella breweri*); Cactus wren

(*Campylorhynchus brunneicappillus*); Common poorwill (*Phalaenoptilus nuttallii*); Common raven; House finch (*Carpodacus mexicanus*); Lesser nighthawk (*Chordeiles acutipennis*); Mourning dove (*Zenaida macroura*); Northern flicker (*Colaptes auratus*); Northern mockingbird (*Mimus polyglottos*); Rock wren (*Salpinctes obsoletus*); and Turkey vulture (*Cathartes aura*). In addition, six special status migratory birds were observed in the Project Area, including the following: Golden eagle (*Aquila chrysaetos*); Prairie falcon (*Falco mexicanus*); Burrowing owl (*Athene cunicularia*); Le Conte's thrasher (*Toxostoma lecontei*); California thrasher (*Toxostoma redivivum*); and Loggerhead shrike (*Lanius ludovicianus*). Refer to Section 3.1.12 for additional information pertaining to the special status migratory birds.

Due to the timing of the survey, some migratory bird species or winter residents that could potentially use the Project Area may not have been detected during the field evaluation. No nocturnal surveys were conducted; therefore, these potential biological resources would not be accounted for other than by general habitat associations and potential occurrence information provided through the literature and database review.

3.1.8 Native American Religious Concerns

The Project Area is located within the BLM California Desert District (District) boundaries. Around the time of European contact in the 18th century, the Native American tribes of Paiute, Shoshone, Kawaiisu, Kitanemuk, Serrano, Vanyume, Chemehuevi, and Mojave occupied the District. Kawaiisu occupied the southern Sierra, as well as Indian Wells Valley, El Paso Mountains in the vicinity of the Project Area, Tehachapi Mountains, and adjacent areas.

Cultural, traditional, and spiritual sites and activities of importance to tribes include, but are not limited to the following: existing antelope traps; certain mountain tops used for vision questing and prayer; medicinal and edible plant gathering locations; prehistoric and historic village sites and gravesites; sites associated with creation stories; hot and cold springs; collection of materials used for basketry and cradle board making; locations of stone tools such as points and grinding stones (mono and matate); chert and obsidian quarries; hunting sites; sweat lodge locations; locations of pine nut ceremonies, traditional gathering, and camping; rocks used for offerings and medicine gathering; tribally identified Traditional Cultural Properties (TCPs); TCPs found eligible to the NRHP; rock shelters; rock art locations; lands or resources that are near, within, or bordering current reservation boundaries, and actions that conflict with tribal land acquisition efforts.
In accordance with the NHPA (Public Law [P.L.] 89-665), the NEPA, the FLPMA (P.L. 94-579), the American Indian Religious Freedom Act (P.L. 95-341), the Native American Graves Protection and Repatriation Act [NAGPRA] (P.L. 101-601) and EO 13007, the BLM must provide affected tribes an opportunity to comment and consult on the proposed Project. The BLM must attempt to limit, reduce, or possibly eliminate any negative impacts to Native American traditional/cultural/spiritual sites, activities, and resources.

On January 11, 2011, consultation initiation/invitation letters were mailed from the BLM RFO to the following Native American communities: Kern Valley Indian Council; Tubatulabals of Kern Valley; Nuui Cunni Interpretative Center; and Monache Intertribal Council. The BLM Tribal Liaison continues to conduct follow up contacts with the noted entities.

3.1.9 Recreation

The Project Area is adjacent to two large recreational areas: El Paso Mountains Wilderness to the northeast and Red Rock Canyon State Park to the south. Recreational uses in the El Paso Mountains Wilderness include primitive camping, hiking, hunting, fishing, non-commercial trapping, and horseback riding. There are no developed campgrounds, and mechanized or motorized vehicles are not permitted in the wilderness area. Red Rock Canyon State Park has one developed campground in its boundaries. Other recreational activities available in the park include: hiking; biking; horseback riding; and off-road vehicle usage. Motorized vehicles are allowed on the dirt roads in the park.

3.1.10 Soils

The Project Area is located within the Mojave Desert Major Land Resource Area (MLRA) (Natural Resource Conservation Service [NRCS] 2010). In general, the soils that dominate the Mojave Desert MLRA are Aridisols and Entisols and are generally well drained to excessively drained. Wind and water erosion are only severe in areas subject to intensive recreational usage, with soil disturbance caused by motorcycles and off-road vehicles. The NRCS has not completed soil mapping of the area in which the Project is located. The Project Area subject to mining activities does not have a soil profile and is a cap rock formation (i.e., outcrop). The access roads consist mainly of sand. No topsoil is present within the Project Area or surrounding vicinity. The surrounding area has sandy alluvial soils with little to no organic matter present.

3.1.11 Special Status Species

BLM policy for management of special status species is in the BLM Manual Section 6840. Special status species include the following:

- Federally Threatened or Endangered Species: Any species that the USFWS has listed as an endangered or threatened species under the ESA of 1973, as amended throughout all or a significant portion of its range;

- Proposed Threatened or Endangered Species: Any species that the USFWS has proposed for listing as a federally endangered or threatened species under the ESA;

- Candidate Species: Plant and animal taxa that are under consideration for possible listing as threatened or endangered under the ESA;

- BLM Sensitive Species: 1) Species that are currently under status review by the USFWS; 2) Species whose numbers are declining so rapidly that federal listing may become necessary; 3) Species with typically small and widely dispersed populations; or 4) Species that inhabit ecological refugia or other specialized or unique habitats; and

- State of California: State-protected animals that have been determined to meet BLM's Manual 6840 policy definition.

- The USFWS and the CDFG were contacted and the CNDDB was queried to obtain a list of threatened and endangered and sensitive species that have the potential to occur within

the Project Area. In addition, the BLM Sensitive Species List and Special Status Species (threatened and endangered) lists for California were evaluated. The special status wildlife and plant species that have potential to occur within the Project Area are further discussed below.

3.1.11.1 Special Status Wildlife Species

A wildlife survey was completed for the Project within the WSA May 26 through May 31, 2008. Every animal species encountered was identified to a level sufficient to determine if it was a special status species. Special habitat features were recorded with Global Positioning System (GPS) points (Figure 3.1.1). Table 3.1-4 displays the special status wildlife species that are likely to occur within the Project Area.

Table 3.1-4: Special Status Wildlife Species Like to Occur Within the Project Area

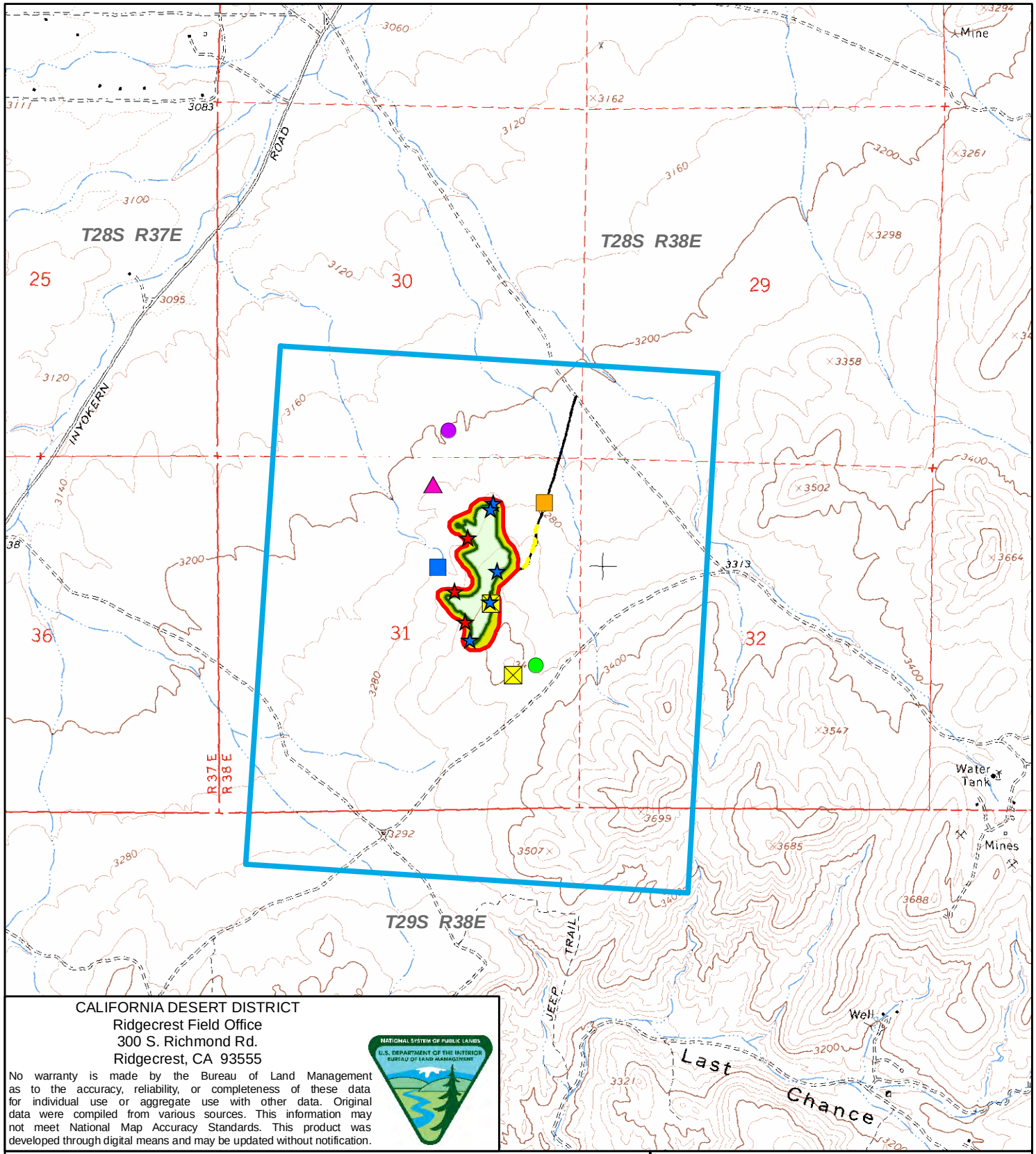
Common Name	Scientific Name	Federal Status	California Status	BLM Status	Times Present
Desert tortoise	*Gopherus agassizii*	Threatened	Threatened	Sensitive	Year-round
Burrowing owl	*Athene cunicularia*		SSC	Sensitive	Year-round
Prairie falcon	*Falco mexicanus*	MBTA; USFWS Bird of Conservation Concern; CDFG Watch List			Year-round
Golden eagle	*Aquila chrysaetos*	Bald and Golden Eagle Protection Act	Fully Protected	Sensitive	Year-round
Le Conte's thrasher	*Toxostoma lecontei*	MBTA	SSC	Sensitive	Year-round
Loggerhead shrike	*Lanius ludovicianus*	MBTA	SSC	Sensitive	Year-round
Mohave ground squirrel	*Xerospermophilus mohavensis*		Threatened	Sensitive	Year-round
Spotted bat	*Euderma maculatum*			Sensitive	Year-round
Townsend's big-eared bat	*Corynorhinus townsendii*		SSC	Sensitive	Year-round
Pallid bat	*Antrozous pallidus*		SSC	Sensitive	Year-round
American badger	*Taxidea taxus*		SSC		Year-round

Note: SSC = species of special concern

Threatened or Endangered Species

Desert Tortoise

Since the 1970s, the Mojave Desert populations of desert tortoises have declined by more than 90 percent. Population decline has been linked to severe diseases in tortoises and loss of suitable habitat from anthropogenic factors such as habitat fragmentation, habitat changes, and land use



CALIFORNIA DESERT DISTRICT
Ridgecrest Field Office
300 S. Richmond Rd.
Ridgecrest, CA 93555

Explanation

- Project Area
- Wildlife Survey Area
- Existing Access Road
- Road Areas to be Widened
- Mojave Mixed Woody Scrub
- Mojave Creosote Bush Scrub (Cap Rock)
- Burrowing Owl
- Burrowing Owl in Burrow
- Desert Tortoise in Burrow
- Female Desert Tortoise
- Male Desert Tortoise
- Mohave Ground Squirrel Burrow
- Joshua Tree (estimate)
- Mojave Fishhook Cactus

0 1,000 2,000 Feet

N

BUREAU OF LAND MANAGEMENT

LAPOZZ PROJECT

Biological Resources

Figure 3.1.1

11/30/2012

conversions in the deserts of California. The desert tortoise is a state and federally Threatened species.

A desert tortoise survey was conducted for the Project Area May 26 through May 31, 2008. The survey adhered to the USFWS – January 1992 Field Survey Protocol for any Non-Federal Action that May Occur within the Range of the Desert Tortoise.

One live adult male desert tortoise and one live adult female desert tortoise were observed within the WSA. One desert tortoise in a burrow was also observed in the WSA (Figure 3.3.1). For additional details on the desert tortoise field survey, refer to Figure 2 of the Desert Tortoise Survey Report (Enviroscientists 2008).

Other Sensitive Wildlife Species

In addition to federally listed species discussed above (i.e., protected by the ESA), the BLM also protects special status species by policy (BLM 1988). The CDFG also lists species as endangered, threatened, fully protected, or of special concern.

The BLM and CDFG have identified that various BLM and state sensitive wildlife species have the potential to occur within the Project Area.

Mammals

The MGS is listed as a BLM sensitive species as well as a California state listed threatened species. The MGS generally occurs in flat to moderate terrain and is not found in steep terrain. Substrates in occupied habitats have ranged from being very sandy to, less frequently, very rocky. The MGS is considered to be absent, or nearly so, on dry lakebeds, lava flows, and steep, rocky slopes, although juveniles may disperse through such areas. The squirrel uses burrows at the base of shrubs for cover and nests in burrows. During a May 2008 field survey, suitable habitat was observed along the access road to the Project Area. An MGS was spotted by a BLM biologist along BLM Route EP-460, which would be within one of the road portions proposed to be widened.

The Project Area is contained within a region classified as the Mohave Ground Squirrel Conservation Area under authority of the West Mojave Management Plan (an amendment of the California Desert Conservation Area management plan approved March 2006). BLM policy and the West Mojave Management Plan call for managing the public lands in such a manner as to avoid degradation of MGS habitat.

Bats

There is potential for BLM sensitive bat species to occur in the area, such as Townsend's big-eared bat, Pallid bat and the Spotted bat. Townsend's big-eared bat are colonial cave dwellers thought to have declining populations. In desert habitats, pallid bats roost mostly in rock crevices, although they might be found in tree cavities, old buildings, under bridges, in caves and mine adits. The cliff roosts for spotted bat are within Red Rock Canyon State Park. The proposed site supports no known significant bat roosts, but provides some foraging habitat for these species.

Birds

The upland bird species group includes migrants, winter residents, breeders, and all others that depend on the upland habitat to survive. Most of the native bird species within the Project Area are protected under the Migratory Bird Treaty Act, but some have additional status.

Raptors, as a group, use this upland area primarily for hunting prey, so they need a vegetative community that produces an abundance of rodents, rabbits, and other prey species.

The Golden eagle is listed as a BLM sensitive species and uses rugged and remote mountain ranges for nesting, and forages over open desert in a range approaching 100 square miles. The May 2008 field survey indicated that there was no nesting habitat present within the Project Area, but potential foraging habitat is present. The CNDDB search reported this species in the Red Rock Canyon State Park, approximately seven miles southwest of the Project Area.

The Prairie falcon is found throughout the western Mojave Desert, and generally avoids urbanized areas. Nests are located on cliffs in rugged mountain ranges, often within 0.5 mile of a water source. Mountain ranges near agricultural areas also are favored because of increased prey density near nest sites. In winter, falcons disperse widely, and are joined by migratory birds from northern latitudes. The May 2008 field survey did not identify any nesting habitat within the Project Area. The CNDDB search reported an observation in 1977 in the Saltdale NW Quadrangle. The distance to the Project Area is unknown, as specific location information is not available.

During the May 2010 field survey, some of the bird species that were observed in the Project Area included the Burrowing owl, a BLM sensitive species, Le Conte's thrasher, California thrasher, and loggerhead shrike. The Burrowing owl species is found in level grassland, prairie or desert floor habitat. The Burrowing owl has adapted well to locations on the urban fringe, such as flood control channels or agricultural areas. Two occurrences of burrowing owls were documented during the field survey in the WSA. Figure 3.1.1 shows the locations of the owl occurrences in the WSA, both outside of the proposed disturbance area.

Le Conte's thrasher is considered a BLM sensitive San Joaquin subspecies and a California species of special concern. The habitat for this species depends on creosote bush scrub with stands of cholla cactus, Joshua trees, and thorny shrubs. This species commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat. A Le Conte's thrasher was observed in the vicinity of the Project Area during the May 2008 field survey. There was no nesting habitat available within the Project Area, but foraging habitat was available in the vicinity of the Project Area.

The loggerhead shrike is a California species of special concern. This species frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low or sparse herbaceous cover. The loggerhead shrike builds nests on stable branches usually well-concealed in densely-foliaged shrubs or trees. This species was observed in the Project Area during the May 2008 field survey.

3.1.11.2 Special Status Plant Species

During a special status plant survey in the WSA in May 2008, no sensitive plants were found. Suitable habitat is present for threetooth blazingstar or dentate blazing star (*Mentzelia tridentata*), Charlotte's phacelia (*Phacelia nashiana*), and Red Rock poppy (*Eschscholzia minutiflora* ssp. *twisselmannii*), but none of these species were detected during the survey. Species that were present in the Project Area and protected under the California Native Plant Protection Act include the three Joshua tree (*Yucca brevifolia*) occurrences and three Mojave fish-hook cactus (*Sclerocactus polyancistrus*) occurrences (Figure 3.1.1).

A database search was conducted for the Project Area from the CNDDB and the California Native Plant Society (CNPS). The following sensitive species were determined to have the potential to occur within the Project Area:

Alkali mariposa lily (*Calochortus striatus*) is a perennial bulb that blooms from April to June. The Alkali mariposa lily is found along seeps and meadows in the chenopod scrub and chaparral from 200 to 4,000 feet amsl. The Alkali mariposa lily is a CNPS 1B.2 and BLM sensitive species.

Redrock tarweed (*Deinandra arida*) is an annual herb found where water collects in clay soils along ephemeral drainages in the Mojave scrub. The Redrock tarweed has been found between 2,800 feet and 4,500 feet amsl and blooms between May and November. The Redrock tarweed is a CNPS 1B.2 and California Endangered Species Act (CESA) rare species.

Red Rock poppy is an annual herb found in the Mojave desert scrub on volcanic tuff. The Red Rock poppy blooms March through May and has been found at elevations between 2,000 and 6,120 feet. The Red Rock poppy is a CNPS 1B.2 and BLM sensitive species.

Threetooth blazingstar or dentate blazing star is an annual herb found in the Mojave desert scrub. This herb has been found between 2,100 and 3,500 feet amsl and blooms March through May. This herb is listed as CNPS 1B.3 and BLM sensitive.

Charlotte's phacelia is an annual herb that blooms between April and May. It has been found in the Joshua tree woodland, Mojave scrub, and Piñon/Juniper woodland between 1,800 and 6,600 feet. It is listed as CNPS 1B.2 and BLM sensitive.

3.1.12 Vegetation

A vegetation survey was performed for the Project Area on April 4, 2010. The vegetation community present on the cap rock area is the Mojave Creosote Bush Scrub (Figure 3.1.1). The majority of the cap rock area proposed to be mined and reclaimed is currently devoid of vegetation or sparsely vegetated due to the lack of suitable growth media for plants on this outcrop. The vegetation community peripheral to the cap rock is the Mojave Mixed Woody Scrub, which occurs on the sandy alluvial soils (Figure 3.1.1). These vegetation communities were dominated by several shrub species including: Eastern Mojave Buckwheat (*Eriogonum fasciculatum*); linear-leaf goldenbush (*Ericameria linearfolia*); and paperbag bush (*Salazaria mexicana*). The understory consisted of typical weedy annual grassland vegetation that consisted of the following species: Red brome (*Bromus madritensis* ssp. *rubens*); fiddleneck (*Amsinckia*

tessellata); and storksbill (*Erodium cicutarium*). Vegetation typical of the Mojave scrub vegetation type was present although not dominant and included Joshua tree and creosote bush (*Larrea tridentata*). Native perennial grasses were present mostly on the cap rock and included: Sandberg's bluegrass (*Poa secunda*), desert needlegrass; and Indian rice grass. Cactus species found included CNPS List 4.2 Mojave fish-hook cactus and silver cholla (*Opuntia echinocarpa*).

3.1.13 Visual Resources

The Visual Resource Management (VRM) system designates classes for BLM-administered lands in order to identify and evaluate scenic values to determine the appropriate levels of management during land use planning. Each management class portrays the relative value of the visual resources and serves as a tool that describes the visual management objectives (Table 3.1-5) (BLM 1986).

Table 3.1-5: BLM Visual Resource Management Classes

Class	Description
I	The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.
II	The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any change must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
III	The objective of this class is to partially retain the existing character of the landscape. The level of change to the character should be moderate. Management activities may attract attention, but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
IV	The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. Management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

Source: BLM 1986

A Visual Resource Inventory was completed for the RFO in December 2011. The Project Area has been inventoried and recommended for a VRM Class II designation. The cap rock foundation that is being proposed for removal with this Project is not characteristic of the surrounding landscape. The surrounding landscape primarily consists of gently rolling hills with desert vegetation, such as Mojave Mixed Woody Scrub.

3.1.14 Wastes, Hazardous or Solid

Hazardous materials used in the Project Area include fuels used to operate equipment associated with Project activities. Vehicles traveling on public roads in the Project Area would result in the presence of other hazardous materials and wastes (e.g., fuel, antifreeze, battery acid, lead tire weights, mercury switches, or catalytic converters) for the duration of travel.

All refuse generated by Project activities would be transported off site and be disposed of at an authorized off-site landfill facility.

3.1.15 Water Quality – Surface and Ground

3.1.15.1 Surface Water Resources

Surface water in the vicinity of the Project Area is dependent on seasonal precipitation. The Project Area does not receive much precipitation, with average annual rainfall levels of approximately 4.17 inches per year (WRCC 2010). Cool-season precipitation is the most extensive source of rain in the Mojave Desert region, and is widespread with a relatively long duration. Warm-season precipitation results from convective thunderstorms.

There are no springs, seeps, perennial drainages, wetlands, or riparian areas within the Project Area. There are two ephemeral drainages located to the east and west of the Project Area that flow north and likely channel any excess surface runoff from storm events. These features would not be impacted or disturbed by the Project. Surface drainage in the Project Area is in the form of sheet flow in the case of a precipitation event; however, due to the sandy soil, rapid infiltration of the rainfall is likely.

3.1.15.2 Ground Water Resources

The Project Area lies within the Indian Wells Valley Ground Water Basin (6-54). This basin encompasses approximately 382,000 acres or 597 square miles. The Sierra Nevada Range bounds the basin on the west, the Coso Range on the north, the Argus Range on the east, and the El Paso Mountains on the south (DWR 2010). This basin is closed and internally drained, and is bounded by an outcrop of igneous and metamorphic basement rock complexes.

The Indian Wells Valley Cooperative Ground Water Management Group has been monitoring ground water levels in the basin since approximately 1995. The closest well to the Project Area, located approximately 8.2 miles northeast, is well T27S/R38E-23F (USBR #1), which was measured having depths to ground water of approximately 185 feet below the surface elevation of 2,850.47 feet amsl (IWVCGMG 2010).

3.1.16 Wildlife

The elevation of the Project Area ranges from approximately 3,200 to 3,450 feet amsl. Habitat within the Project Area is typical of the Mojave Desert and is dominated by creosote bush, white bursage (*Ambrosia dumosa*), scattered Mojave yucca (*Yucca schidigera*), and an overstory of Joshua tree. Caliche rock outcrops are present and these locations tended to be dominated by cactus such as barrel cactus (*Ferocactus cylandraceous*) and unidentified fish-hook cactus (*Mammillaria* spp.). No springs, ephemeral, or perennial water are present in the Project Area.

In May 2008, a general wildlife survey was performed covering the various wildlife habitat types within the Project Area. The presence of wildlife species was recorded through direct observation or by calls, tracks, scat, pellets, or other signs. All observations were recorded by taxon, family, and identified to species or genus when applicable. Survey conditions including temperature, wind, and other variables that may affect wildlife activity were recorded. An overall assessment of the available wildlife and vegetation habitat associations and resources was conducted, which included the documentation of water resources, rock outcrops, thermal cover, cliffs, nesting habitat, and other general features of the Project Area that may be utilized by resident or migratory wildlife species.

In addition to the special status species that were identified during the wildlife survey in May 2008, other non-sensitive species were also encountered. The only non-migratory bird species observed within the Project Area was Gambel's quail (*Callipepla gambelii*). The following mammals were observed within the Project Area: Antelope ground squirrel (*Ammospermophilus leucurus*); Black-tailed jackrabbit (*Lepus californicus*); Coyote (*Canis latrans*); Desert cottontail (*Slyvilagus nuttallii*); and Desert woodrat (*Neotoma lepida*). The following reptiles were observed within the Project Area: Desert spiny lizard (*Sceloporus magister*); Great Basin collared lizard (*Crotaphytus crotaphytus bicnictores*); Great Basin whiptail (*Cnemidophorus tigris tigris*); Side-blotched lizard (*Uta stansburiana*); and Zebra-tailed lizard (*Callisaurus draconoides*).

4 ENVIRONMENTAL CONSEQUENCES

The direct and indirect effects of the Proposed Action on resources present and brought forward for analysis are discussed in this section. Direct effects are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. The effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems (40 CFR 1508.8).

4.1 Proposed Action

4.1.1 Air Quality and Atmospheric Values

The Proposed Action has the potential to disturb up to 34.48 acres. Travel on dirt access roads and drilling activities within the Project Area has the potential to create fugitive dust and vehicle emissions. In order to comply with the PM_{10} State Implementation Plan, a dust control plan would be prepared for the Project which would provide measures to reduce fugitive dust such as reducing speed limits on access roads and by using water trucks for dust suppression. BMPs would be outlined in the dust control plan to be prepared for the Project. Reclamation of surface disturbance would gradually eliminate any potential for long-term impacts to air resources. A federal conformity analysis was performed on PM_{10} emissions for the Project. The Project would produce approximately 3.98 tpy of unmitigated emissions. With mitigation including watering of access roads and reduced speed limits, emissions would be approximately 1.02 tpy. These emissions are both below the federal PM_{10} standards for a maintenance area. Therefore, no further conformity or determination analysis is required. In addition, air permits have been obtained for the crushing plant (Registration #124859) and generator (Registration #124540), and the Project would be subject to complete an Air Quality Impact Assessment with Kern County.

4.1.2 Cultural Resources

Based on the results of the Class-III cultural surveys conducted by ASM in 2008 and 2011, and with concurrence from the BLM RFO, there would be no adverse affect to cultural resources listed or eligible for listing on the NRHP. In addition, as described in Section 2.1.10, should CalPortland discover any cultural resource not previously identified during the Class-III cultural resource inventory, the discovery would be left intact and reported to the authorized BLM officer. Additionally, CalPortland would cease work and notify the BLM immediately upon the discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony.

No adverse effects are anticipated to cultural resources as a result of the Proposed Action. This resource is not further analyzed in the EA.

4.1.3 Floodplains

As previously discussed in Section 3.4, the existing access road that leads into the Project Area crosses the Little Dixie Wash and has a Zone A flood designation. Since there are no structures being placed within the Zone A area, and there are no persons living in the area that would be affected by flood hazards, impacts from the Proposed Action to floodplains are anticipated to be minimal. In addition, the environmental protection measure outlined in Section 2.1.10 stated that

no vehicle traffic would cross the wash when water is present. This resource is not further analyzed in this EA.

4.1.4 Geology and Mineral Resources

Implementation of the Proposed Action would result in the removal of a pozzolan deposit up to 12 feet thick, totaling 420,000 tons removed over the life of the Project. However, the Project would not involve the removal of large volumes of earth that could potentially lead to structural instability, as the material would be removed off the top of a cap rock formation. There are other pozzolan deposits in the vicinity of the Project Area, which would result in minimal impacts to the depletion of the pozzolan resource. This resource is not further analyzed in this EA.

4.1.5 Land Use, Realty, and Access

The Proposed Action would result in surface disturbance of up to 34.48 acres within the physical boundaries of Kern County, California on lands managed by the BLM. Since the lands are managed by the BLM, there would be no impacts to General Plan or zoning designations for the Project Area as designated by Kern County. The Project would also be in conformance with the West Mojave Plan, which also serves as the HCP for that portion of Kern County. The closest established community to the Project Area is the city of Inyokern, which is approximately 17 miles northeast of the Project Area. Access to the Project Area would not be altered, but an existing three-mile dirt access road would be widened by 0.08 acre in five discrete segments. Therefore, the Proposed Action would result in no impacts to land use, realty, and access so are not further analyzed in this EA.

4.1.6 Livestock Grazing

The Project Area lies within the Cantil Common Grazing Allotment. The Project includes surface disturbance of approximately 34.48 acres over a 20-year period. Sheep would only travel down the Project access road once per year, as they are required to keep moving and are only allowed one pass through a given site. Therefore, impacts to sheep grazing from the Proposed Action would be minimal, and the drivers of the Project vehicles and equipment would avoid any sheep along the access road.

No fencing, cattle guards, or other rangeland improvements are present within the Project Area and therefore would not be impacted by the Project.

4.1.7 Migratory Birds

As discussed previously, there were several migratory birds identified on site during the May 2008 field survey. In order to avoid any potential disturbance to migratory bird habitat in the Project Area, an environmental protection measure was outlined in Section 2.1.10 stating that scheduling of Project activities should be scheduled outside breeding season (March 15 through July 30) if possible. This protection measure would ensure that no short-term impacts to migratory birds would occur. In addition, reclamation activities would be conducted concurrently with mining activities when feasible, after the material excavation is complete. Therefore, no long-term impacts to migratory bird habitat are likely to occur. However, cumulative impacts to

migratory birds may occur; therefore, this resource is analyzed further in Chapter 5, Cumulative Effects.

4.1.8 Native American Religious Concerns

Various tribes have stated that federal projects and land actions can have widespread effects to their culture and religion as they consider the landscape as sacred and as a provider. Various locations throughout the BLM RFO administrative area host certain traditional, spiritual, and cultural use activities today, as in the past. TCPs, designated by the tribes, are not known to exist within the vicinity of the Project Area. The BLM continues to solicit input from local tribal entities.

For this Proposed Action, the BLM has committed to avoiding those eligible and unevaluated archaeological sites discovered and documented during cultural resources inventories. The BLM is currently in the process of attempting to identify (with the local tribes) any other sites, artifacts, or cultural, traditional, and spiritual use resources and activities that might experience an impact.

If any TCPs, tribal resources, sacred sites, etc. are identified within or in close proximity to the Project boundary, a protective "buffer zone" may be acceptable, if doing so satisfies the needs of the BLM, the proponent, and affected Tribe. The size of any "buffer zone" would be determined through coordination and communication between all participating entities.

The BLM Cultural Resource Specialists, accompanied by designated tribal observers, may periodically visit identified cultural resources sites within or near the mine boundary. Native American consultation and monitoring by the BLM and Tribal Cultural Resource Specialists can occur throughout the life of a project to ensure that any identified TCPs are not deteriorating.

During the Project's activities, if any cultural properties, items, or artifacts (i.e., stone tools, projectile points, etc.) are encountered, it must be stressed to those involved in the proposed Project activities that such items are not to be collected (Section 2.1.10). Cultural and archaeological resources are protected under the Archaeological Resources Protection Act (16 United States Code [U.S.C.] 470ii) and the FLPMA.

Though the possibility of disturbing Native American gravesites within most project areas is extremely low, inadvertent discovery procedures must be noted. Under the NAGPRA, Section (3)(d)(1), it states that the discovering individual must notify the land manager in writing of such a discovery. If the discovery occurs in connection with an authorized use, the activity, which caused the discovery, is to cease and the materials are to be protected until the land manager can respond to the situation.

There have not been any Native American religious concerns identified for this Project, so this resource is not analyzed further in this EA.

4.1.9 Recreation

As previously discussed, the Project Area is located adjacent to the El Paso Mountains Wilderness and Red Rock Canyon State Park. The main access route to the Project Area, SR 14, is also used by tourists to access the two recreation areas. Any surface disturbance activities

associated with the Proposed Action would not result in any direct impacts to recreation in the vicinity of the Project Area. Any impacts to recreation area access would be minimized by the environmental protection measures outlined in Section 2.1.10; therefore, the Proposed Action is not anticipated to result in any impacts to recreation. This resource is not further analyzed in this EA.

4.1.10 Soils

Surface disturbance associated with the Proposed Action would impact up to approximately 34.48 acres of soils. Disturbance would be created incrementally and dispersed throughout the Project Area and would be reclaimed and revegetated. The cap rock formation overlies a sedimentary rock formation consistent with the surrounding alluvium, which would be the final exposed surface following reclamation activities. This friable surface of poorly cemented sandstone will serve as an improved growth media for vegetation compared to the existing cap rock which supports little vegetation.

There are minimal chances for erosion, as there is no topsoil present in the Project Area or in the vicinity of the Project. However, in the event of any potential of soil erosion, any impacts would be reduced by the implementation of a SWPPP (Appendix B of the Plan) which incorporates measures to reduce erosion and to control site stabilization. In addition, any potential impacts to soils would also be reduced by the environmental protection measures incorporated into the Project design as described in Section 2.1.10 that includes reseeding for erosion and sediment control, as well as BMPs that would help prevent any unnecessary or undue degradation. Therefore, impacts to soils are anticipated to be minimal. This resource is not further analyzed in this EA.

4.1.11 Special Status Species

The following special status species were encountered in the WSA during a May 2008 field survey: Desert tortoise; burrowing owl; and loggerhead shrike. Desert tortoise was also encountered in the Project Area during an August 2012 site visit and MGS was encountered on a August 2008 site visit. Implementation of the Proposed Action could result in the temporary disturbance to Desert tortoise habitat, as well as breeding and nesting habitat impacts to burrowing owl, and loggerhead shrike. In consultation and coordination with the BLM and USFWS, protection measures have been incorporated into the Project for Desert tortoise (see Section 2.1.10). In addition, the Project has incorporated a protection measure to avoid nesting migratory birds; therefore, the destruction of active nests or disruption of breeding behavior of sensitive bird species would not occur as a result of the implementation of the Proposed Action.

Mohave Ground Squirrel

Based on field surveys conducted in May 2008, there is suitable habitat for MGS along the access road proposed to be widened, BLM Route EP-460. No MGS or sign of MGS was noted during the 2008 surveys. In addition, there has been an observation of a MGS by a BLM biologist and an active burrow was discovered at Universal Transverse Mercator (UTM) Zone 11S 0416469N 3924545E. Although suitable habitat was not identified on the cap rock foundation during field surveys in May 2008, the CDFG indicated that potential habitat could occur on the cap rock foundation during an August 2012 field visit.

CalPortland would implement the following measures to reduce potential take of the MGS:

- Prior to any surface disturbing activities, CalPortland would require all Project employees to attend an Environmental Awareness Program for the MGS, developed and presented by a qualified biologist which would include the following:

  a. A detailed description of the MGS including color photographs;
  b. A summary of the protection given the MGS under the California Endangered Species Act and the definition of "take" under the act, along with a synopsis of possible legal actions that could be implemented from violations of the act;
  c. The measures being implemented to avoid potential "take" of MGS; and
  d. A point of contact if MGS are observed.

  The employees would be required to wear a visible badge stating that they have attended the awareness program; any employees that do not have a visible badge would not be allowed within the proposed disturbance area;

- Existing roads that are planned for widening would not extend beyond the planned widening area. All vehicles passing or turning around shall do so within the planned widening area or within the existing road width;

- The stockpile area would be marked to define the limits where stockpiling would occur. BMPs would be employed to prevent loss of potential habitat due to erosion caused by Project activities. All detected erosion would be remedied within two days of discovery;

- Fueling of all Project equipment would be conducted off site. Equipment would be checked for leaks prior to entering the Project site and repaired as necessary;

- CalPortland would limit all Project activities to existing roads and proposed disturbance areas;

- Vehicle speeds would not exceed 20 miles per hour through the Project Area and on access roads;

- A full-time biological monitor would be required on site during initial surface disturbing activities for each phase of the Project;

- If the biological monitor observes a MGS on or within 500 feet of areas subject to surface disturbance, work at the location where the MGS was detected shall stop until approved by the CDFG and BLM; and

- If the biological monitor observes MGS being killed, determines that a MGS was killed by Project-related activities, or observes a dead MGS, a written report would be sent to CDFG and BLM within five calendar days. The report would include the date, time of the finding or incident (if known), and the location of the carcass and circumstances of the death (if known). MGS remains would be collected and frozen as soon as possible, and CDFG would be contacted regarding ultimate disposal of the remains.

If the above measures are not satisfactory to the CDFG to reduce the potential for take to an appropriate level to the MGS, as discussed in the environmental protection measure identified in Section 2.1.10, CalPortland would work with the CDFG to identify additional protection measures or would obtain an Incidental Take Permit to account for the potential take of this species.

Desert Tortoise

Based on field surveys conducted in May 2008, there were three desert tortoises found within the WSA; however, there were none found within the Project Area. During a routine field visit in August 2012, a desert tortoise was found in a burrow. CalPortland has submitted the USFWS biological opinion to the CDFG under Fish and Game Code Section 2080.1 Consistency Determination. If the CDFG determines the USFWS biological opinion is sufficient and consistent with the CESA, then no further action would be taken. If the CDFG determines the USFWS biological opinion is not consistent with the CESA, then as discussed in the environmental protection measure identified in Section 2.1.10, the Project would obtain an Incidental Take Permit from CDFG to account for the potential take of the species.

Joshua Tree and Mojave fish-hook cactus

The Joshua Tree and Mojave fish-hook cactus were identified within the proposed disturbance area of the Project (Figure 3.1.1). An environmental protection measure has been added in Section 2.1.10 that calls for complete avoidance of these species, if possible, or potential transplant of the Mojave fish-hook cactus.

4.1.12 Vegetation

Implementation of the Proposed Action would result in a temporary surface disturbance of up to 20.20 acres of Mojave Creosote Bush Scrub (or the entire cap rock formation) and 14.2 acres of Mojave Mixed Woody Scrub vegetation. Reclamation measures outlined in Section 2.1.9 would take place after the completion of the Project. All areas subject to reclamation would be reseeded with a BLM approved seed mix (Table 2.1-2). The BLM-approved seed mixture would be similar to pre-disturbance vegetation conditions. The mix is designed to provide species that can exist in the environment of the California desert, are proven species for revegetation, or are native species found it the plant communities prior to disturbance.

4.1.13 Visual Resources

As discussed previously, the Project Area has been inventoried and recommended for a VRM Class II designation. Impacts to visual resources are based on changes to the existing character of the landscape, in which the level of change should be low. Mining and surface disturbance activities associated with the Proposed Action may potentially affect the form, lines, and color of the landscape but the change would be minimal. The Project would result in short-term visual impacts principally affecting the visual elements of color through the disturbance of existing vegetation. In addition, temporary impacts would occur with the placement of mining equipment onsite, which would be removed during long periods of non-operation. In addition, reclamation of the cap rock formation would include recontouring to mimic the surrounding topography and

reseeding with a BLM-approved seed mix. Impacts are considered minimal and temporary. Therefore, this resource is not analyzed further in this EA.

4.1.14 Wastes, Hazardous or Solid

The generation of wastes and the use of hazardous materials as a result of the Proposed Action may result in the release of these wastes or materials. Vehicles traveling on public roads in the Project Area would result in the presence of other hazardous materials and wastes (e.g., fuel, antifreeze, battery acid, lead tire weights, mercury switches, or catalytic converters) for the duration of travel. A Spill Contingency Plan has been included in the Plan, to outline BMPs for the following: hazardous material delivery and storage; spill prevention and control; solid waste management; hazardous waste management; and liquid waste management. With the utilization of these BMPs, substantial impacts from hazardous and solid wastes are not anticipated. This resource is not further analyzed in this EA.

4.1.15 Water Quality – Surface and Ground

Mining activities associated with implementation of the Proposed Action would not alter the existing drainage pattern of the site, or create substantial additional sources of runoff. As outlined in the environmental protection measures in Section 2.1.10, a SWPPP would be implemented to control sedimentation from the Project disturbance. In addition, a Spill Contingency Plan is included in the Plan to prevent impacts to ephemeral surface waters.

By implementing the above protection measures, any impacts to surface water quality would be minimized. Therefore, this resource is not further analyzed in this EA.

As previously discussed, ground water has been encountered in the Indian Wells Valley Ground Water Basin at 185 feet below a surface elevation of 2,850.47 feet amsl. The cap rock formation to be mined has elevations of 3,188 feet amsl to 3,441 feet amsl. Since mining activities would occur on an elevated bench and would only remove the top nine to 12 feet of this topographic feature, it is not likely that the mining activities would encounter ground water. Therefore, this resource is not further analyzed in this EA.

4.1.16 Wildlife

Direct impacts to wildlife would consist of habitat loss and disturbance from human activity and noise. Approximately 34.48 acres of existing wildlife habitat would be impacted by Project activities over the 20-year life span of the Project. No long-term impacts to wildlife habitat are likely to occur since reclamation and reestablishment of vegetation would take place within three years after Project completion. Reclamation activities would occur concurrently with Project activities when feasible.

Although long-term improvement of habitat could occur in the Project Area as surface disturbance is reclaimed and revegetated and a greater amount of forb species becomes available for wildlife foraging, minimal short-term indirect impacts to wildlife would occur due to the short-term temporary loss of vegetation as a result of Project-related surface disturbance.

4.2 No Action Alternative

Under the No Action Alternative, none of the impacts associated with the Proposed Action would occur, as the Proposed Action would not be implemented. The 0.35 acre of existing surface disturbance (identified in the Plan of Operations CACA-48524) would remain until fully reclaimed, and result in impacts similar but proportionately less than those associated with the Proposed Action (0.35 acre of disturbance versus 34.48 acres).

4.2.1 Air Quality and Atmospheric Values

The No Action Alternative would include surface disturbance of 0.35 acre on public land. Under the No Action Alternative, travel on dirt roads and exploration activities would create fugitive dust, causing a minor impact to air resources. Since there would be less truck travel on the dirt roads and 34.13 fewer acres of surface disturbance associated with the No Action Alternative, impacts to air quality under the No Action Alternative would be less than the impacts associated with the Project.

4.2.2 Cultural Resources

Under the No Action Alternative, there would be no impacts to cultural resources because all previously mapped cultural sites would be avoided as specified in the approval letter issued by the BLM for the Plan of Operations CACA-48524.

4.2.3 Floodplains

Under the No Action Alternative, impacts would be similar to those anticipated under the Proposed Action, as the Little Dixie Wash would continue to be crossed to access the area used for exploration activities. However, impacts have the potential to be greater under the No Action Alternative, as there is no environmental protection measure that states trucks would not be able to cross the wash under flood events, as stated for the Proposed Action.

4.2.4 Geology and Mineral Resources

Under the No Action Alternative, 10,000 tons of material were removed from the area, while 420,000 tons of material would be removed under the Proposed Action, resulting in an additional 410,000 tons of material removed. Therefore, impacts to geology and mineral resources under the No Action Alternative would be less than under the Proposed Action.

4.2.5 Land Use, Realty, and Access

Similar to the Project's impacts, there would be no impacts to land use, realty, and access under the No Action Alternative.

4.2.6 Livestock Grazing

Impacts to livestock grazing would be similar under the No Action Alternative, as the Project access road would still be utilized. However, under the No Action Alternative, there would be

fewer vehicles traveling along the access road, which would result in fewer opportunities for potential collisions with sheep.

4.2.7 Migratory Birds

Under the No Action Alternative, surface disturbance activities would impact 0.35 acre versus 34.48 acres under the Proposed Action, therefore resulting in less potential to impact the breeding and nesting activities of migratory birds.

4.2.8 Native American Religious Concerns

Under the No Action Alternative, CalPortland would continue their exploration activities under their amended Plan of Operations CACA-48524. The BLM RFO would continue consultation with the local tribes with regards to ongoing and proposed projects and land management activities. No concerns pertaining to the existing exploration activities have been brought to the BLM's attention; therefore, at this time, there would be no impacts to Native American Religious Concerns under the No Action Alternative.

4.2.9 Recreation

Similar to the Project's impacts, the No Action Alternative would result in no impacts to recreation under the No Action Alternative.

4.2.10 Soils

Under the No Action Alternative, surface disturbance activities would impact 0.35 acre versus 34.48 acres under the Proposed Action. The potential for wind and water erosion of disturbed soils would be incrementally less than those associated with the Proposed Action, as the Proposed Action would disturb approximately 34.13 additional acres and would have a greater potential for wind and water erosion of disturbed soils.

4.2.11 Special Status Species

Under the No Action Alternative, surface disturbance activities would impact 0.35 acre of habitat versus 34.48 acres under the Proposed Action. Impacts to special status species under the No Action Alternative would be similar in nature to those impacts associated with the Proposed Action. However, due to the removal of 34.13 fewer acres of habitat under the No Action Alternative, impacts would be significantly less than under the Proposed Action. In addition, the No Action Alternative would implement the measures identified in CACA-48524 for the protection of the MGS and the desert tortoise.

4.2.12 Vegetation

Under the No Action Alternative, surface disturbance activities would impact 0.35 acre as opposed to 34.48 acres of surface disturbance associated with the Proposed Action. Due to the removal of 34.13 fewer acres of vegetation under the No Action Alternative, impacts would be proportionately less than under the Proposed Action.

4.2.13 Wastes, Hazardous or Solid

Since the activities associated with the No Action Alternative consist of minimal exploration drilling using non-hazardous materials and fewer vehicles in the Project Area, the impacts from hazardous or solid wastes would be similar to but less than impacts associated with the Proposed Action.

4.2.14 Water Quality – Surface and Ground

Potential water quality impacts as a result of this alternative could result due to the fact that this alternative does not implement the environmental protection measures identified in the Proposed Action. However, the 0.35 acre of disturbance under this alternative would be reclaimed and revegetated as soon as practicable following exploration activities resulting in no long-term impacts to surface water quality. The No Action Alterative would not implement a SWPPP to reduce impacts to surface water quality; however, the No Action Alternative would only disturb 0.35 acre versus 34.48 acres under the Proposed Action. Therefore, impacts to surface water quality would be less under the No Action Alternative.

As previously discussed, ground water has been encountered in the Indian Wells Valley Ground Water Basin at 185 feet below a surface elevation of 2,850 feet amsl. The cap rock formation used for exploration activities under the No Action Alternative has elevations of 3,188 feet amsl to 3,441 feet amsl. Under the No Action Alternative, the 80-foot deep drill holes would not likely encounter ground water, at elevations of 3,108 feet amsl to 3,361 feet amsl. These levels are between approximately 257 feet and 510 feet above the levels where ground water was encountered. Impacts to ground water quality under the No Action Alternative would be similar to impacts under the Proposed Action.

4.2.15 Wildlife

Under the No Action Alternative, surface disturbing activities impacted 0.35 acre of wildlife habitat versus 34.48 acres under the Proposed Action. Impacts to wildlife under the No Action Alternative would be similar in nature to those impacts associated with the Proposed Action. However, due to the removal of 34.13 fewer acres of habitat under the No Action Alternative, impacts would be proportionately less than under the Proposed Action.

5 CUMULATIVE EFFECTS

For the purpose of this EA, the cumulative impacts are the sum of all past, present, and reasonably foreseeable future actions (RFFAs) resulting primarily from dispersed recreation, and ROW and alternative energy development. The purpose of the cumulative analysis in this EA is to evaluate the significance of the Project's contributions to cumulative impacts. A cumulative impact is defined under federal regulations as follows:

> "…the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individual minor but collectively significant actions taken place over a period of time" (40 CFR 1508.7).

As required under the NEPA and the regulations implementing the NEPA, this chapter addresses those cumulative effects on the environmental resources in the Cumulative Effects Study Areas (CESAs) that could result from the implementation of the Proposed Action and No Action Alternative. The extent of the CESAs will vary by each resource, based on the geographic or biological limits of that resource. As a result, the list of projects considered under the cumulative analysis may vary according to the resource being considered. In addition, the length of time for cumulative effects analysis will vary according to the duration of impacts from the Project on the particular resource.

For the purposes of this analysis and under federal regulations, the terms 'impacts' and 'effects' are assumed to have the same meaning and are interchangeable. The cumulative impacts analysis was accomplished through the following three steps:

Step 1: Identify, describe, and map CESAs for each resource to be evaluated in this chapter.

Step 2: Define time frames, scenarios, and acreage estimates for cumulative impact analysis.

Step 3: Identify and quantify the location of possible specific impacts from the Project and judge the significance of these contributions to the overall impacts.

5.1 Cumulative Effects Study Areas

Impacts and environmental consequences of the Project were evaluated previously in Chapter 4 for the various environmental resources. Discussed in the following sections are the resources that have the potential to be cumulatively impacted by the Project within the identified CESA. The discussions are based upon the previous analysis of each environmental resource. Based on the preceding analysis, the Project would not impact the following resources and would therefore not have cumulative impacts: Cultural Resources; Floodplains; Land Use, Realty, and Access; Livestock Grazing; Native American Religious Concerns; Noxious Weeds, Invasive and Nonnative Species; Paleontological Resources; Socioeconomic Values (includes Environmental Justice); Soils; Visual Resources; Wastes, Hazardous or Solid; Water Quality – Surface and Ground; Wild Horses and Burros; and Wilderness. These resources are not discussed further in the cumulative impacts section.

The geographical areas considered for the analysis of cumulative effects vary in size and shape to reflect each evaluated environmental resource and the potential area of impact to each from

the Project as determined through the analysis in Chapter 4. For this cumulative impact analysis, the CESA for air quality is the Kern County portion of the Mojave Desert Air Basin, and encompasses 361,617 acres. The CESA for biological resources (general wildlife, migratory birds, sensitive species, and vegetation) and geology and mineral resources is the Upper Little Dixie Wash watershed, and totals 23,877 acres. The CESA for recreation has been defined as an area encompassing the Red Rock Canyon State Park and the El Paso Mountains Wilderness, and totals 53,755 acres. Table 5.1-1 outlines the CESA area by each resource. Figure 5.1.1 shows the CESA boundaries.

Table 5.1-1: Cumulative Effects Study Areas

Resource	Cumulative Effects Study Area (CESA)	Description of CESA	Size of CESA (acres)
Air Quality and Atmospheric Values	Air Quality CESA	Kern County portion of the Mojave Desert Air Basin	361,617
Biological Resources (including Vegetation, Migratory Birds, Sensitive Species, and General Wildlife)	Immediate Watershed CESA	Upper Little Dixie Wash Watershed	23,877

5.2 Past and Present Actions

Past and present actions in the three CESAs include the following: wildland fires; wildlife and game habitat management; dispersed recreation; utility and other ROWs; mineral exploration; mining; and alternative energy development.

Wildland Fires

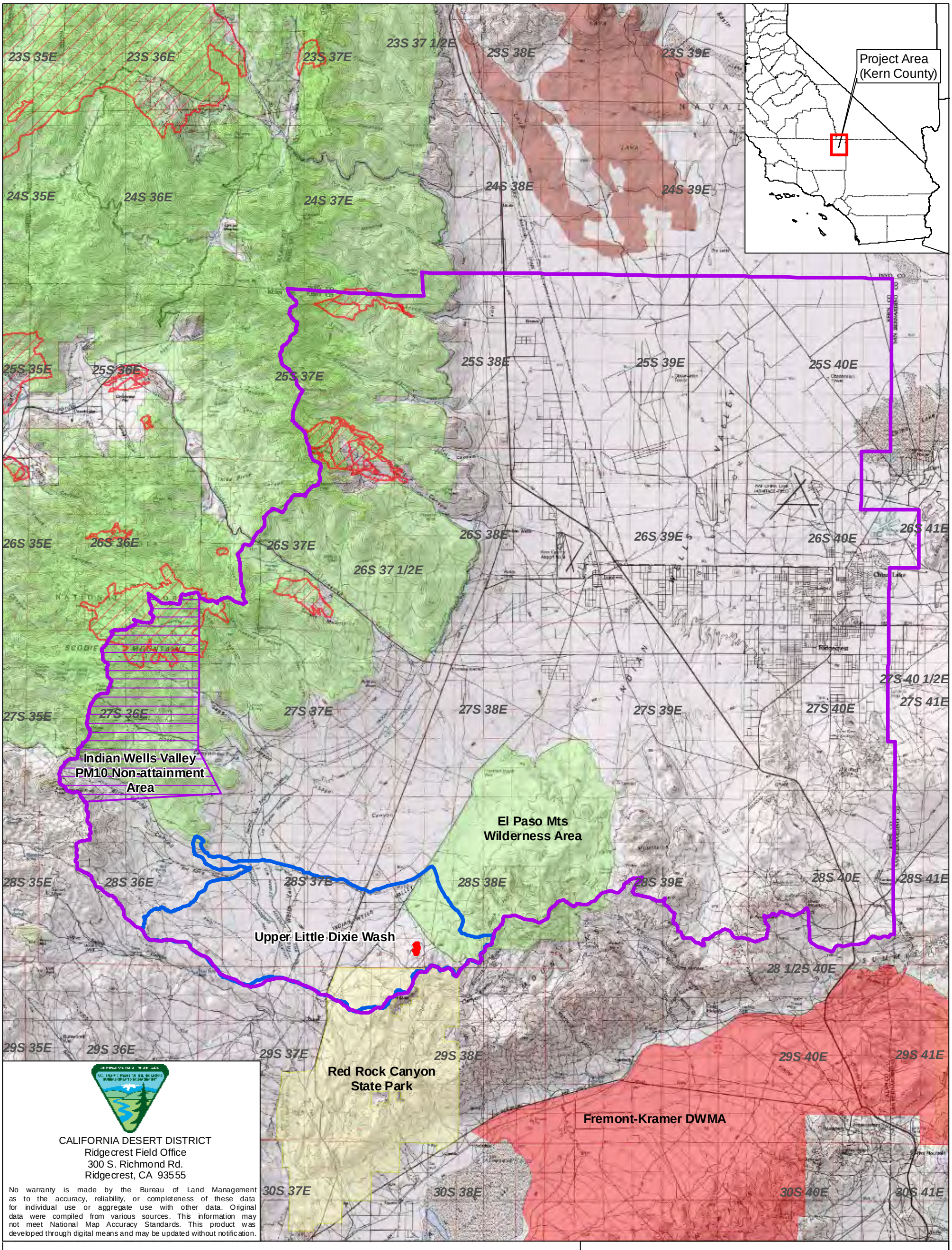
There has been recorded wildland fire disturbance in the Air Quality CESA of 7,313 acres (1980-2011), and is shown on Figure 5.1.1. There has been no recorded wildland fire disturbance in the Immediate Watershed CESA or the Recreation CESA.

Wildlife and Game Habitat Management

Research and management of big game and wildlife are undertaken by the BLM, in coordination with the USFWS, under the CDCAP and the West Mojave Plan. The West Mojave Plan, in which the Project Area is covered, serves as an HCP and federal land use plan amendment that presents comprehensive strategies for the conservation and protection of the desert tortoise, MGS, and nearly 100 other sensitive plants and animals in the area.

Dispersed Recreation

Historic and present recreational use within the Recreation CESA includes the following: camping; hiking; biking; hunting; fishing; non-commercial trapping; horseback riding; and off-road vehicle usage. The El Paso Mountains Wilderness, which encompasses 23,780 acres, is located to the northeast of the Project Area, and is entirely within the Recreation CESA. The Red Rock Canyon State Park, which encompasses approximately 27,000 acres, is located to the south of the Project Area and is also entirely within the Recreation CESA. Dispersed uses in the area



CALIFORNIA DESERT DISTRICT
Ridgecrest Field Office
300 S. Richmond Rd.
Ridgecrest, CA 93555

Explanation

- Project Area
- Air Quality CESA
- Immediate Watershed CESA — *Vegetation, Wildlife, Migratory Birds, Sensitive Species.*
- Wilderness Area
- Red Rock Canyon State Park
- Fires (1980-2011)
- Fremont-Kramer Desert Wildlife Management Area

1:200,000

0 5 Miles

Projection: UTM Zone 11 North, NAD83

N

BUREAU OF LAND MANAGEMENT

LAPOZZ PROJECT

Cumulative Effects Study Areas

Figure 5.1.1

11/30/2012

may have resulted in the introduction of nonnative or invasive species, or contributed to the loss of soils and vegetation and increased erosion.

Rights-of-Way

The LR2000 database was used to query the various types of ROWs that have been approved in the three CESAs by Township, Range, and Section, and include the following: telephone; power transmission; roads and highways; railroads; communication sites; irrigation and water facilities; wind generation projects; solar development projects; other federal facilities; and other (undefined) ROWs. The approximate acreage of each ROW within each CESA associated with these ROWs is listed in Table 5.2-1. The acreage of surface disturbance associated with these ROWs cannot be quantified; however, it is assumed that these types of ROWs and the construction and maintenance associated with these facilities would create a level of surface disturbance that would contribute to cumulative impacts to various resources. In addition, certain types of ROWs can fragment habitat or create barriers or hazards for wildlife passage. The LR2000 database was queried on October 31, 2011. Any newly approved ROWs that have been added to the LR2000 database after this date are not included in this analysis.

Table 5.2-1: Past and Present Rights-of-Way Acres in the CESAs

ROW Type	Air Quality CESA	Immediate Watershed CESA	Recreation CESA
Telephone	278	47	48
Power Transmission	1,091	0	0
Roads and Highways	1,049	181	249
Railroads	969	0	2
Communication Sites	84	36	0
Irrigation/Water Facilities	957	852	853
Other Federal Facilities	9,538	0	0
Other	14,353	1	296
Total	**28,319**	**1,117**	**1,448**

Mineral Exploration and Mining

The LR2000 database was used to query the past and present mineral exploration or mining activities (authorized Notices, expired Notices, closed Notices, approved and closed plan of operations) that have been issued in the three CESAs by Township, Range, and Section. Past and present minerals activities in the three CESAs include historic exploration and mining operations. Table 5.2-2 is a summary of the past and present mineral activities within each CESA; the totals are based on the LR2000 database used by the BLM. The LR2000 database was queried on October 31, 2011; therefore, any newly approved ROWs that have been added to the LR2000 database after this date are not included in this analysis.

Table 5.2-2: Past and Present Minerals Disturbance Acres in the CESAs

CESA	Authorization Status	Total Acres of Disturbance
Air Quality CESA	Closed Notices (6)	18
	Expired Notices (4)	7
	Authorized Notices (1)	1
	Authorized and Closed Plans (19)	580
	Air Quality CESA Total	**606**
Immediate Watershed CESA	Closed Notices (5)	14
	Expired Notices (0)	0
	Authorized Notices (1)	1
	Authorized and Closed Plans (8)	49
	Immediate Watershed CESA Total	**64**
Recreation CESA	Closed Notices (14)	63
	Expired Notices (0)	0
	Authorized Notices (1)	1
	Authorized and Closed Plans (9)	59
	Recreation CESA Total	**123**

Alternative Energy Development

There are a large number of acres of wind generation test sites within the CESAs. Within the Air Quality CESA, there are approximately 78,044 acres of wind generation test sites. Within the Watershed and Recreation CESAs there are approximately 64,021 acres.

5.3 Reasonably Foreseeable Future Actions

RFFAs in the Air Quality CESA include wildland fires, wildlife and game habitat management, ROW construction and maintenance including wind generation facilities, mineral exploration and mining, and dispersed recreation. Quantifiable RFFAs in the Air Quality CESA include approximately 12 acres of ROWs and approximately 46 acres of pending mineral exploration and mining activities.

RFFAs in the Immediate Watershed CESA include wildland fires, wildlife and game habitat management, mineral exploration and mining, wind generation facilities, and dispersed recreation. Quantifiable RFFAs in the Immediate Watershed CESA include approximately 41 acres of pending mineral exploration and mining activities.

RFFAs in the Recreation CESA include wildland fires, wildlife and game habitat management, mineral exploration and mining, road and wind generation facility construction, and dispersed recreation. Quantifiable RFFAs in the Recreation CESA include approximately 49 acres of pending ROWs and approximately 13 acres of pending mineral exploration and mining activities.

5.4 Impact Analysis

5.4.1 Air Quality and Atmospheric Values

The CESA for air quality is the Kern County portion of the Mojave Desert Air Basin, which encompasses 361,617 acres and is shown on Figure 5.1.1.

Past and Present Actions: Past and present actions that have the potential to impact air quality would have included mineral exploration and mining, ROW construction and maintenance, and dispersed recreation, that disturbed or impacted soils creating fugitive dust or that had the potential to generate emissions. Soil disturbance may also have been associated with wildland fires; however, fire rehabilitation and natural revegetation have likely occurred, stabilizing soils. There are no specific data that quantify impacts from roads, ROWs, or recreation. Table 5.4-1 provides a summary of the 2010 emissions within the Air Quality CESA.

Table 5.4-1: Air Quality Emissions within the Air Quality CESA

Source Type	Emissions (tons per day)							
	TOG	**ROG**	**CO**	**NO_x**	**SO_x**	**PM**	**PM_{10}**	**$PM_{2.5}$**
Stationary Sources	8.7	1.2	11.5	20.9	3.6	10.9	6.7	2.5
Areawide Sources	4.9	2.1	3.9	0.3	0	40.9	20.5	3.3
Mobile Sources	11.7	10.4	72.8	33.6	0.4	4.3	4.3	4.0
Total	**25.3**	**13.8**	**88.2**	**54.7**	**4.1**	**56.1**	**31.5**	**9.8**

Source: CARB 2010b

Historic fires (1980-2011) have burned approximately 7,313 acres in the Air Quality CESA (two percent of the CESA). Approved, closed or expired mineral exploration and mining Notices or Plans total approximately 606 acres (approximately 0.2 percent of the CESA) of surface disturbance. There are no data on the number of acres reclaimed. State and federal regulations require reclamation; therefore, it is reasonable to assume that some areas have been reclaimed, have become naturally stabilized, and have naturally revegetated over time. Approximately 28,319 acres of ROWs were issued within the Air Quality CESA that had the potential to create fugitive dust or emissions. The surface disturbance associated with these activities had the potential to contribute to soil erosion and degradation of access roads leading to fugitive dust.

RFFAs: Wildland fires, wildlife and game habitat management, ROW construction and maintenance, wind generation facilities, mineral exploration and mining, and dispersed recreation are likely to continue within the Air Quality CESA that have the potential to impact air quality.

5.4.1.1 Proposed Action

The incremental contribution of the Proposed Action's particulate and combustion emissions and fugitive dust would be relatively small and the cumulative emissions are generally dispersed. Stationary sources would be regulated by the CARB under individual permits to ensure that impacts would be reduced to levels that are consistent with the ambient air quality standards. Resource protection measures are included in the Project that would minimize the potential effects of fugitive dust on air quality. Reclamation of Project-related proposed surface disturbance would gradually eliminate fugitive dust from wind erosion. There are no issues of concern related to the cumulative impacts on air quality.

5.4.1.2 No Action Alternative

A total of the quantifiable past and present actions and RFFA disturbance within the Air Quality CESA is approximately 36,296 acres, which is an impact to approximately ten percent of the Air Quality CESA. This alternative (0.35 acre) impacted less than 0.00001 percent of the CESA. Due to the small impact within the Air Quality CESA, the impacts to air quality from this alternative, in combination with past and present actions and RFFAs, would be minimal.

5.4.2 Migratory Birds

The CESA for migratory birds is the Immediate Watershed CESA which encompasses 23,877 acres and is shown on Figure 5.1.1.

Past and Present Actions: Past and present actions that could have impacted migratory birds are livestock grazing, wildlife and game habitat management, dispersed recreation, utility and other ROWs, mineral exploration, and mining. Impacts to migratory birds have resulted from the following: 1) destruction of habitat associated with road building and cutting trees; 2) disruption from human presence or noise from drill rigs, water trucks and four wheel drive (4WD) pickups; and 3) direct impacts or harm to migratory birds that would result if trees containing viable nests were cut down or ground nests destroyed by construction or ranching equipment. There are no specific data that quantify impacts to migratory birds as a result of grazing or recreation. However, impacts to migratory birds from recreation activities would include destruction of native vegetation or nesting areas from off-road vehicles that traveled off of established roadways.

Approved, closed or expired mineral exploration and mining Notices or plans of operations total approximately 64 acres (approximately 0.3 percent of the CESA) of surface disturbance. There are no data on the number of acres reclaimed. State and federal regulations require reclamation; therefore, it is reasonable to assume that some areas have been reclaimed, become naturally stabilized or have naturally revegetated over time. Approximately 1,117 acres of ROWs were issued within the Immediate Watershed CESA that had the potential to create surface disturbance and disturb migratory bird habitat and vegetation. However, disturbance to migratory birds from past and present actions would have been reduced through reclamation and seeding of disturbed areas and natural recolonization of native species. The past and present actions that are quantifiable have disturbed only a small portion of the CESA, approximately five percent.

RFFAs: Potential impacts to migratory birds from dispersed recreation, road maintenance, ROWs, minerals activities, or loss of native vegetation associated with potential wildland fires could occur. There are no specific data on the potential impacts to migratory birds or their habitat as a result of dispersed recreation, grazing, or potential wildland fires. There are approximately 41 acres of pending minerals projects. These pending minerals projects are all required to incorporate protection measures for migratory birds and therefore are not expected to directly harm migratory birds, but may result in habitat removal or alteration.

5.4.2.1 Proposed Action

Impacts to migratory birds and their habitat from the Project would be limited to the removal of vegetation, or destruction of habitat (up to 34.48 acres), and noise associated with blasting. These

impacts would be localized and minimized due to implementation of the resource protection measures outlined in Section 2.1.10. The Project would affect approximately 0.1 percent of the Immediate Watershed CESA.

Quantifiable past and present actions and RFFA disturbance for the Immediate Watershed CESA is approximately 1,222 acres, which is an impact to approximately five percent of the total Immediate Watershed CESA (23,877 acres). Based on the above analysis and findings, incremental impacts to migratory birds as a result of the Proposed Action when added to the past and present actions and RFFAs are expected to be minimal.

5.4.2.2 No Action Alternative

A total of the quantifiable past and present actions and RFFA disturbance within the Immediate Watershed CESA is approximately 1,222 acres, which is an impact to approximately five percent of the Immediate Watershed CESA. This alternative (0.35 acre) impacted less than 0.0015 percent of the CESA. Due to the small impact within the Immediate Watershed CESA, the incremental impacts to migratory birds and their habitat from this alternative in combination with past and present actions and RFFAs would be minimal.

5.4.3 Special Status Species

The CESA for special status species is the Immediate Watershed CESA which encompasses 23,877 acres and is shown on Figure 5.1.1.

Past and Present Actions: Past and present actions that could have impacted special status species include wildlife and game habitat management, dispersed recreation, utility and other ROW construction and maintenance, mineral exploration, and mining. These activities are likely to have had impacts to water resources and wildlife habitat, or result in direct impacts to individuals in travel routes. Specific impacts to special status species have included the following: 1) destruction of habitat associated with road construction and maintenance; 2) disruption from human presence or noise from blasting techniques, drill rigs, water trucks and 4WD pickups; or 3) loss of forage, cover, and habitat as well as disturbance of mating and brood rearing practices. There are no specific data that quantify impacts to special status species as a result of recreation. However, impacts to special status species from recreation activities would have included destruction of native vegetation, nesting areas, or habitat, from off-road vehicles that traveled off of established roadways.

Approved, closed or expired mineral exploration and mining Notices or plans of operations total approximately 64 acres (approximately 0.3 percent of the CESA) of surface disturbance. There are no data on the number of acres reclaimed. State and federal regulations require reclamation; therefore, it is reasonable to assume that some areas have been reclaimed, become naturally stabilized or have naturally revegetated over time. Approximately 1,117 acres of ROWs were issued within the Immediate Watershed CESA that had the potential to create noise, and the disturbance to wildlife in the removal or alternation of habitat. However, disturbance to special status species from past and present actions would have been reduced through reclamation and seeding of disturbed areas and natural recolonization of native species. The past and present actions that are quantifiable have disturbed only a small portion of the CESA, approximately five percent.

RFFAs: Potential impacts to special status species from dispersed recreation, road maintenance, ROWs, minerals activities, or loss of native vegetation associated with potential wildland fires could occur. There are no specific data on the potential impacts to special status species, including habitat as a result of dispersed recreation or potential wildland fires. There are approximately 41 acres of pending minerals projects. These pending minerals projects are all required to incorporate protection measures for special status species and therefore are not expected to directly harm special status species, but may result in habitat removal or alteration.

5.4.3.1 Proposed Action

Impacts to special status species and their habitat from the Project would be limited to the removal of vegetation, or destruction of habitat (up to 34.48 acres), and noise associated with blasting. These impacts would be localized and minimized due to implementation of the resource protection measures outlined in Section 2.1.10. The Project would affect approximately 0.1 percent of the Immediate Watershed CESA.

Quantifiable past and present actions and RFFA disturbance for the Immediate Watershed CESA is approximately 1,222 acres, which is an impact to approximately five percent of the total Immediate Watershed CESA (23,877 acres). Based on the above analysis and findings, incremental impacts to special status species as a result of the Proposed Action when added to the past and present actions and RFFAs are expected to be minimal.

5.4.3.2 No Action Alternative

A total of the quantifiable past and present actions and RFFA disturbance within the Immediate Watershed CESA is approximately 1,222 acres, which is an impact to approximately five percent of the Immediate Watershed CESA. This alternative (0.35 acre) impacted less than 0.0015 percent of the CESA. Due to the small impact within the Immediate Watershed CESA, the impacts to special status species, including habitat, from this alternative in combination with past and present actions and RFFAs would be minimal.

5.4.4 Vegetation

The CESA for vegetation is the Immediate Watershed CESA which encompasses 23,877 acres and is shown on Figure 5.1.1.

Past and Present Actions: Past and present actions that could have impacted vegetation include wildlife and game habitat management, dispersed recreation, utility and other ROW construction and maintenance, mineral exploration, and mining.

Approved, closed or expired mineral exploration and mining Notices or plans of operations total approximately 64 acres (approximately 0.3 percent of the CESA) of surface disturbance. There are no data on the number of acres reclaimed. State and federal regulations require reclamation; therefore, it is reasonable to assume that some areas have been reclaimed, become naturally stabilized or have naturally revegetated over time. Approximately 1,117 acres of ROWs were issued within the Immediate Watershed CESA that had the potential to create surface disturbance. Activities associated with dispersed recreation could have brought in vehicles to the area which could have introduced invasive species and trampled vegetation. However,

disturbance to vegetation from past and present actions would have been reduced through reclamation and seeding of disturbed areas and natural recolonization of native species. The past and present actions that are quantifiable have disturbed only a small portion of the CESA, approximately five percent.

RFFAs: Potential impacts to vegetation from dispersed recreation, road maintenance, ROWs, minerals activities, or loss of native vegetation associated with potential wildland fires could occur. There are no specific data on the potential impacts to vegetation as a result of dispersed recreation or potential wildland fires. There are approximately 41 acres of pending minerals projects. Impacts to vegetation associated with RFFAs would be similar to the impacts described for past and present actions.

5.4.4.1 Proposed Action

Impacts to vegetation from the Project would be limited to vegetation removal or the introduction of invasive species. These impacts would be localized and minimized due to implementation of the resource protection measures outlined in Section 2.1.10. The Project would affect approximately 0.1 percent of the Immediate Watershed CESA.

Quantifiable past and present actions and RFFA disturbance for the Immediate Watershed CESA is approximately 1,222 acres, which is an impact to approximately five percent of the total Immediate Watershed CESA (23,877 acres). Based on the above analysis and findings, incremental impacts to vegetation as a result of the Project when added to the past and present actions and RFFAs are expected to be minimal.

5.4.4.2 No Action Alternative

A total of the quantifiable past and present actions and RFFA disturbance within the Immediate Watershed CESA is approximately 1,222 acres, which is an impact to approximately five percent of the Immediate Watershed CESA. This alternative (0.35 acre) impacted less than 0.0015 percent of the CESA. Due to the small impact within the Immediate Watershed CESA, the impacts to vegetation from this alternative in combination with past and present actions and RFFAs would be minimal.

5.4.5 Wildlife

The CESA for wildlife is the Immediate Watershed CESA which encompasses 23,877 acres and is shown on Figure 5.1.1.

Past and Present Actions: Past and present actions that could have impacted wildlife include wildlife and game habitat management, dispersed recreation, utility and other ROW construction and maintenance, mineral exploration, and mining. These activities are likely to have had impacts to water resources and wildlife habitat, or result in direct impacts to individuals in travel routes. Specific impacts to wildlife have included the following: 1) destruction of habitat associated with road construction and maintenance; 2) disruption from human presence or noise from blasting techniques, drill rigs, water trucks and 4WD pickups; or 3) loss of forage, cover, and habitat as well as disturbance of mating and brood rearing practices. There are no specific data that quantify impacts to wildlife as a result of recreation. However, impacts to wildlife from

recreation activities would include destruction of native vegetation, nesting areas, or habitat, from off-road vehicles that traveled off of established roadways.

Approved, closed or expired mineral exploration and mining Notices or plans of operations total approximately 64 acres (approximately 0.3 percent of the CESA) of surface disturbance. There are no data on the number of acres reclaimed. State and federal regulations require reclamation; therefore, it is reasonable to assume that some areas have been reclaimed, become naturally stabilized or have naturally revegetated over time. Approximately 1,117 acres of ROWs were issued within the Immediate Watershed CESA that had the potential to create noise, and the disturbance to wildlife in the removal or alternation of habitat. However, disturbance to wildlife from past and present actions would have been reduced through reclamation and seeding of disturbed areas and natural recolonization of native species. The past and present actions that are quantifiable have disturbed only a small portion of the CESA, approximately five percent.

RFFAs: Potential impacts to wildlife from dispersed recreation, road maintenance, ROWs, minerals activities, or loss of native vegetation associated with potential wildland fires could occur. There are no specific data on the potential impacts to wildlife, including habitat, as a result of dispersed recreation or potential wildland fires. There are approximately 41 acres of pending minerals projects. These pending minerals projects are all required to incorporate protection measures for wildlife and therefore are not expected to directly harm wildlife, but may result in habitat removal or alteration.

5.4.5.1 Proposed Action

Impacts to wildlife from the Project would be limited to the removal of vegetation, or destruction of habitat (up to 32.78 acres), and noise associated with blasting. These impacts would be localized and minimized due to implementation of the resource protection measures outlined in Section 2.1.10. The Project would affect approximately 0.1 percent of the Immediate Watershed CESA.

Quantifiable past and present actions and RFFA disturbance for the Immediate Watershed CESA is approximately 1,222 acres, which is an impact to approximately five percent of the total Immediate Watershed CESA (23,877 acres). Based on the above analysis and findings, incremental impacts to wildlife as a result of the Project when added to the past and present actions and RFFAs are expected to be minimal.

5.4.5.2 No Action Alternative

A total of the quantifiable past and present actions and RFFA disturbance within the Immediate Watershed CESA is approximately 1,222 acres, which is an impact to approximately five percent of the Immediate Watershed CESA. This alternative (0.35 acre) impacted less than 0.0015 percent of the CESA. Due to the small impact within the Immediate Watershed CESA, the impacts to wildlife, including habitat, from this alternative in combination with past and present actions and RFFAs would be minimal.

6 CONSULTATION AND PUBLIC INPUT

6.1 List of Preparers

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Ashley Blythe	Cultural Resources
Carrie Woods	Biological Resources
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Kathleen Cox	Geology
Glenn Harris	Air Quality, Soils, Hydrology and Water Quality, Vegetation
Craig Beck	Recreation, Aesthetics
Paul Rodriquez	Land Use and Planning

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Opal Adams	Project Principal, review/editing
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Catherine Lee	Senior Project Specialist
Kaitlin Sweet	LR2000 Database; Soils; Geology and Minerals; Paleontological Resources
Nick Mitrovich	LR2000 Database Update
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6.2 Persons, Groups and Agencies Contacted

Federal Agencies

Raymond Bransfield, Ventura Fish and Wildlife Office

State Agencies

Linda Connolly, California Department of Fish and Game
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Native Americans

Kern Valley Indian Council
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